

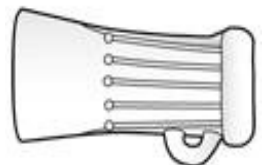
Proposed Wind Turbine on Land at Hillside Farm Chacewater, Cornwall Archaeological Assessment

Author: Hayley Goacher BA (Hons) PlfA

Date: July 2012



Archaeological
Consultancy Ltd.



Archaeological Consultancy Limited
Goodagrane, Halvasso, Penryn, Cornwall, TR10 9BX
Tel 0044 (0)1326 341 061
E-mail enquiries@archaeologicalconsultancy.com
Website www.archaeologicalconsultancy.com

England and Wales Registered Company No. 5784610

Acknowledgements

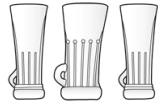
This study was commissioned by Chloe Bines of Migrid and carried out by Archaeological Consultancy Ltd (AC).

The desk-based research was undertaken by the author, with help kindly provided by Bryn Perry Tapper (Sites and Monuments Records, Historic Environment), and staff at the Cornwall Record Office (CRO) Cornwall Council (CC). Ross Sinkins and staff at Mining Searches UK provided assistance with the historic maps, whilst Birgit Hontzsch and team at Cornwall Environmental Consultants Ltd kindly provided additional images.

The views and recommendations expressed in this report are those of Archaeological Consultancy Ltd and are presented in good faith on the basis of professional judgement and on information currently available.

Cover illustration

Wheal Busy. Looking southwest



Proposed Wind Turbine on Land at Hillside Farm Chacewater, Cornwall Archaeological Assessment

Author: Hayley Goacher BA (Hons) PlfA
Report Date: July 2012

Project No: AC12009E
Project Officer: Hayley Goacher BA (Hons) PlfA
Project Manager: Matt Mossop MA (Hons) MGSDip MIAI MIfA
Editor: Emma Ruddle BA (Hons) MIAI AlfA

Client: Migrid
Proposal: Installation of one wind turbine
Planning Reference: PA12/02415
Statutory Protection: World Heritage Site

National Grid Reference: SW 74464 44907
Civil Parish: Chacewater
District: Central 1
County: Cornwall

Fieldwork Dates: 14th June 2012
Accession No: Forthcoming

Contents

1	Summary	8
2	Site location	8
2.1	Location	8
2.2	Topography.....	8
2.3	Geology.....	8
3	Project background	9
3.1	Development background	9
3.2	Archaeological and historical background.....	9
4	Project aims and objectives	13
5	Method statement	13
5.1	General methodology.....	13
5.2	Desk-based assessment (DBA) and walk over survey	14
5.3	Impact Assessment.....	14
5.4	Report	14
5.5	Archive.....	15
6	Results	15
7	Statements of Significance	75
7.1	World Heritage Sites (Sites 1-4, 6-10, 38, 39, 44, 89-91, 95, 96, 101, 102, 104-106, 110, 113-115, 119, 120, 122)	75
7.2	Scheduled Monuments (Site 1).....	75
7.3	Listed Buildings (Sites 5, 11-37, 40-43, 45-88)	75
7.4	Sites and Monuments Records.....	76
7.4.1	Regional Significance (Sites 92, 94, 108, 112, 116)	76
7.4.2	Local Significance (Sites 97, 98, 100, 103, 107, 109, 111, 117, 118, 121, 123, 126)	76
7.5	Additional Sites (Sites 124 and 125)	77
8	Impacts	77
8.1	World Heritage Sites (Sites 1-4, 6-10, 38, 39, 44, 89-91, 95, 96, 101, 102, 104-106, 110, 113-115, 119, 120, 122)	77
8.2	Scheduled Monuments (Site 1).....	78
8.3	Listed Buildings (Sites 2-90)	78

8.4	Other Sites.....	79
9	Summary Impacts	79
10	Recommendations.....	79
11	Conclusion	80
12	The Archive	80
13	Bibliography.....	80
	Appendix 1 Brief.....	93
	Appendix 2 Written Scheme of Investigation	98
	List of Figures	
	<i>Figure 1 Site Location Map. Courtesy of MiGrid.....</i>	<i>83</i>
	<i>Figure 2 Turbine development area. Courtesy of MiGrid.....</i>	<i>84</i>
	<i>Figure 3 c1810 Ordnance Survey 1 inch map.....</i>	<i>85</i>
	<i>Figure 4 Tithe Map 1840 for Kenwyn Parish.....</i>	<i>85</i>
	<i>Figure 5 Part of the c1880 Ordnance Survey 1st edition 25 inch map.....</i>	<i>86</i>
	<i>Figure 6 Part of the c1907 Ordnance Survey 2nd edition 25 inch map.....</i>	<i>86</i>
	<i>Figure 7 Locations of gazetteer sites. Map courtesy of Cornwall Council. World Heritage Site Area shown in pink, Proposed Turbine Field shown in red. 87</i>	
	<i>Figure 8 Zone of Theoretical Visibility Map. Courtesy of Cornwall Environmental Consultants Ltd.....</i>	<i>87</i>
	List of Plates	
	<i>Plate 1 View from the Wind Turbine Field. Looking northeast.....</i>	<i>84</i>
	<i>Plate 2 Photographic montage of theoretical view of proposed wind turbine from point VP2 above (Figure 8).....</i>	<i>89</i>
	<i>Plate 3 Photographic montage of theoretical view of proposed wind turbine from Wheal Busy SAM (Site 1 Figure 7 above).....</i>	<i>89</i>
	<i>Plate 4 Other wind turbines visible from Proposed Turbine Field. Looking northeast.....</i>	<i>90</i>
	<i>Plate 5 Representative section of Proposed Turbine Field boundary. Looking east.....</i>	<i>90</i>
	<i>Plate 6 Site 3 Wheal Busy Smithy. Looking southeast.....</i>	<i>91</i>
	<i>Plate 7 Wheal Busy SAM with Smithy (Site 3) and Engine House (Site 1) in the distance. Looking southwest.....</i>	<i>91</i>

<i>Plate 8</i>	<i>Blackwater Railway Viaduct (Site 92) from Proposed Turbine Field. Looking north.</i>	92
----------------	---	----

<i>Plate 9</i>	<i>Blackwater Railway Viaduct (Site 92). Looking southeast.</i>	92
----------------	---	----

List of Tables

<i>Table 1</i>	<i>Sensitivity Rating descriptors</i>	15
----------------	---------------------------------------	----

<i>Table 2</i>	<i>Magnitude of Impact Rating descriptors</i>	16
----------------	---	----

<i>Table 3</i>	<i>Overall Impact descriptors</i>	16
----------------	-----------------------------------	----

Abbreviations

AC	Archaeological Consultancy Ltd
CC	Cornwall Council
CEC	Cornwall Environmental Consultants Ltd
CL	Courtney Library
CRO	Cornwall Record Office
DBA	Desk Based Assessment
DMRB	Design Manual for Roads and Bridges
EH	English Heritage
GIS	Geographical Information System
HE	Historic Environment, Cornwall County Council
HEPAO	Historic Environment Planning Advice Officer
HER	Cornwall and the Isles of Scilly Historic Environment Record
HLC	Historic Landscape Characterisation
IfA	Institute for Archaeologists
LB	Listed Building
LPA	Local Planning Authority
NGR	National Grid Reference
NMR	National Monuments Record, Swindon
NPPF	National Planning Policy Framework
OASIS	Online Access to the Index of Archaeological Investigations
OD	Ordnance Datum
OS	Ordnance Survey
PPS5	Planning Policy Statement 5
SAM	Scheduled Ancient Monument
SMR	Sites and Monuments Record
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHS	World Heritage Site
WSI	Written Scheme of Investigation
ZTV	Zone of Theoretical Visibility

1 Summary

AC Ltd was commissioned by Chloe Bines of Migrid to undertake an archaeological assessment of the site of a proposed wind turbine on land at Hillside Farm (NGR SW 74464 44907) to accompany the planning application in line with pre-application advice received from Cornwall Council.

The proposed wind turbine site is located within the Cornwall Mining World Heritage Site and within a rich prehistoric and historic landscape that includes a Scheduled Monument and a number of Listed Buildings.

The proposed development is likely to have minimal impact on the identified sites, the most pertinent being the visual impact of the turbine on the World Heritage Site (Site 122) including specifically the Wheal Busy complex (Sites 1-4).

Given the completion of the archaeological programme in line with Appendix 2, it may be considered that the substantial positive impact of green energy production and the dissemination of the archaeological results appropriately offset the minor negative impacts identified. No further archaeological work is recommended.

2 Site location

2.1 Location

The site is located approximately three quarters of a kilometre northwest of Chacewater in the civil parish of Chacewater (NGR SW 74464 44907; Figure 1; Figure 2) on land characterised as 'Upland Rough Ground' and 'Post Medieval Enclosed Land' by the Historic Landscape Characterisation (Historic Environment Record, Cornwall Council) with a wind turbine sensitivity (Tapper, 2010, Fig 2) ranking of 12 (mid-range).

2.2 Topography

The site is situated on the northern side and just below the crest of the hill at approximately 110m OD. The ground slopes relatively steeply down to the north and east and more gradually on the west side.

2.3 Geology

The bedrock is recorded as Porthtowan Formation of mudstone and sandstone. This is sedimentary bedrock formed approximately 364 to 391 million years ago in the Devonian Period. Within or very close to the turbine site is a permian-felsite dyke. This is igneous rock formed 248-290 million years ago during the Permian Period from intrusions of silica rich magma (www.bgs.ac.uk/geologyviewer).

3 Project background

3.1 Development background

Following a request for a screening opinion (PA11/06948) for one wind turbine, Cornwall Council responded by requiring an archaeological assessment. AC was commissioned to carry out the archaeological assessment.

The installation of the proposed wind turbine involves:

- Excavation for and insertion of the foundations for the turbine
- Erection of the turbine components
- The excavation of an electrical cable trench and access track.

3.2 Archaeological and historical background

No fewer than seven barrows surround the study area. The majority are no longer visible at all whilst those such as Boscawen Farm (SMR No. MCO34765) and Todpool (SMR No. MCO3578) exist only as crop marks or slight mounds. Although absolute identification and dating is difficult without evaluation trenching, all the examples have been considered by the SMR to be Bronze Age in date.

There are three low earthworks or bank and ditched enclosures considered to be rounds in the vicinity (Todpool MCO3578, Killifreth MCO8132, Wheal Prosper MCO8903) though little is known of them. A further two enclosures at Little Chacewater (MCO34789) and Trevale Farm (MCO34792) are less defined and their date and function remains undetermined.

The surviving Medieval evidence characterises the area as being predominantly agricultural. Many small settlements, such as Creegbrowse (MCO14151), Killifreth (MCO15155) and Penstraze (MCO16242), were first recorded in the 14th or 15th Centuries. The field systems from this period also survive as crop marks, such as at Todpool (MCO35749), or have been incorporated into later systems like those around Briar Farm (MCO34769) and North Wheal Busy (MCO34778).

The Great Wheal Busy Engine House and Mine Buildings complex is the only Scheduled Ancient Monument within 2km of the study area (Figure 7; Plate 6; Plate 7). This site is representative of many of the various elements of the intensive mining activity in the area. The citation reads:

The monument includes the remains of the copper and tin mine Wheal Busy, also known as Chacewater Mine and Great Wheal Busy, situated west of Chacewater on a tract of fairly high and flat country extending west from here through Scorrier. The location comprises level ground and slight slopes around the head of a shallow dry valley falling away to the south. Also included in the scheduling are traces of World War II military activity. The mining remains in this monument are associated

with others nearby. The arsenic works is also a listed building, Grade II. The monument is divided into three separate areas of protection.

The history of Wheal Busy is long and varied. Contemporary accounts, maps, and other documents significantly enhance our understanding of the site. These sources show that this was the most productive of the Scorrier copper mines. In the 18th century in particular it was large and intensive, and its development is marked by the adoption of new pumping engine technologies. These innovations were necessitated by the lack of surface water for power, which led to a notorious conflict with another mine in 1811, and by particularly wet conditions underground. They were made economically viable by the richness of the lodes. The area is crossed by mineral lodes running roughly east-west.

Small-scale tin mines are thought to have been active here in the 17th century, when the ground was largely open downs and around the turn of that century, copper was found as the ore bodies were worked at greater depths. By the 1720s the mine incorporated several earlier works, with most leased by John Coster and his son of the same name. The Coster's introduced or adapted large waterwheels and horse-powered whims or winding engines to Cornish mines to improve the drainage critical to their development at this time. Around 1710 a new water driven rag-and-chain type pump was introduced here, on the edge of the Pittslouarn or Wheal Busy section, thought to lie in the eastern area of protection. Again in this area, around 1725, one of Cornwall's first Newcomen atmospheric or true steam powered pumping engines was erected by Joseph Hornblower. Another such engine was working nearby by the mid-18th century. In the 1770s the mine acquired a Smeaton improved atmospheric engine and Cornwall's first Boulton and Watt condensing engine, both exceptionally powerful.

Through most of the early 19th century the mine prospered, tin becoming an important product around 1857. The name Wheal Busy was extended to the whole mine around 1823. In 1856 the engine house in the north-western area of the monument was built for a Harvey's engine. Mine plans show dressing floors for ore processing in the west part of the main area of the monument, and later, near its south-west area. They also mark the mine count house or office and other service buildings, near the smithy. The smithy building is a listed building and is not included in the scheduling. For some years around 1860 the mine incorporated several others to the north-west, as Great Wheal Busy. Growth was halted in 1866 by the collapse of copper prices. The mine was rich in arsenic, and was reopened for this in several phases until closure in 1928. In 1909 another engine was placed in the 1856 house; the secondary boiler house (which does not form part of this monument) was also built at this time. The two successive arsenic works were sited south of the core of the mine to reduce the nuisance from their fumes. After extraction ended, some spoil was reprocessed for arsenic and wolfram.

The historical sources show that the underground development of the mine was pursued systematically from the time of the Coster's with the driving of slightly inclined tunnels known as adits, to drain water as well as providing ventilation and access to the lodes. Numerous shafts were sunk, some designed to allow connecting adits to be driven from several points at once. In 1778 the workings were linked to the Great County Adit (Cornwall's most extensive drainage tunnel network) discharging some 3.5km southeast. At the end of the 18th century the main lodes were exploited throughout the length of the mine. Shaft names changed frequently, reflecting the growth and evolution of the mine.

In its prime, Wheal Busy was a major Cornish employer, requiring many surface workers for the hand breaking and sorting of copper ore, as well as miners. The mine contributed greatly to the development of the village, and new parish, of Chacewater. It also influenced regional transport networks, for example, sending ore to be shipped for smelting by road to both coasts of Cornwall in the 18th century, then using a pioneering horse drawn tramroad to the north coast.

The eastern part of the monument survives as a complex palimpsest of earthworks, some superimposed, developed over several centuries. It is characterised by numerous early post-medieval lode back pits, which are shallow shafts accessing the upper part of a lode; aerial photographs show how they form lines following the ore lodes. Deeper shafts with adjacent spoil heaps are visible towards the centre, south, and west. Those in the centre are associated with the name pittslouarn and with early steam engine sites, and remains of an engine house, possibly of 1868, are visible here. At least one shaft has an adjoining horse whim platform. Earthworks for managing water are another feature of this area. Reservoirs, retained by dams or fully enclosed by banks, are connected to leats, some diverted around pre-existing earthworks. These will have provided water power, or supplied steam engines.

On the north-west of the area is a cluster of pools for different functions, built up over time. This group seems to have expanded over dressing floors, remains of which can be expected to survive below ground level. Also in the area, on its south-west, are traces of the flue and chimney of the earlier arsenic works.

The area on the north-west of the core area of the monument includes the 1856 pumping engine house, with the site of its first boiler house on its east side, and the shaft it served, Engine Shaft, on its south side. The engine house stands to roof level, retaining the wall openings, internal ledges, bedstone, and other features designed to admit and support the steam engine with its cylinder and rocking beam. Its fabric is local slate stone, with granite at load bearing points, and brick details. The detached chimney is of early telescope-like form and is built of stone and brick. The original boiler house is visible as an earthwork (its

stone was probably reused for its successor). Engine Shaft itself is typical of pre-20th century shafts in that it descends at an angle, slanting to the north along the tilt of the lode so that it passes under the engine house. It extends to the maximum depth of the mine.

The 1900's arsenic works is in the south-west area of the monument. A Brunton calciner for roasting ore to produce arsenical vapour stands to roof level. The structure is of massive granites bound by iron ties, with a brick front retaining iron door fittings. The revolving ore bed and other machinery survive within. West of this are substantial remains of a second, shaft type furnace and beyond, a double labyrinth where arsenic was recovered from the vapour, with much of the stone walling forming its multiple condensing chambers visible. Beyond this are a final scrubbing chamber, and the near intact tall chimney of stone and brick which vented the waste fumes. Much of the ground in the arsenic complex is raised and will contain associated deposits.

In World War II a large temporary US army camp was sited in the centre of Wheal Busy. Aerial photographs show trenches and vehicle tracks of this period in the eastern area of protection, probably used for training by the troops. All modern fencing and safety barriers, gates and gate fittings, waymarkers, and vehicular access blocking rocks, are excluded from the scheduling, although the ground beneath these features is included. (National Heritage List for England Website)

Resulting from the mining activity a multitude of buildings supported the mining communities, particularly within the village of Chacewater. These include Chacewater brewery (MCO29040) and malthouse (MCO29063) schools and nonconformist chapels. The Gothic style Blackwater Board School built in 1877 is one such example and has been Grade II Listed (LB63758). The formerly listed Salem nonconformist chapel (MCO32156), built in 1830, was the first Baptist Chapel in Cornwall but due presumably to its subsequent use as a farm building has had its listed status revoked. Wheal Busy Bible Christian Chapel however, is a fine example of its type. Built in 1863 with an attached Sunday school, it has been granted Grade II* Listed Building status (LB473911). St. Paul's Parish Church (LB63147) was built in 1828 and served the ecclesiastical district of Chacewater. This parish was formed in 1837 from the parishes of Kea and Kenwyn, reflecting the population growth associated with the mining industry in the vicinity.

At least nine recorded smallholdings in the vicinity were abandoned in the 19th Century. Mining activity may have made them untenable or they maybe the remains of miners' smallholdings, which were given up as mines in the area failed towards the end of the century.

On the c.1810 Ordnance Survey map (Figure 3), considerable mining activity is shown, particularly at Wheal Busy and there is substantial settlement at Chacewater. The area north and east of Wheal Busy around the proposed turbine site is unenclosed. At the time of the Tithe Map and Apportionment survey in 1840 (Figure 4), Hillside Farm was part of the Parish of Kenwyn.

Although the surrounding area had been divided up into many small, approximately rectangular fields, the study area was still unenclosed and was probably common land. The owner of the existing fields immediately adjacent to the study area was the Earl of Falmouth.

The Ordnance Survey Maps of 1880 and 1907 (Figure 5; Figure 6) show the gradual enclosure of the area. Enclosure has generally taken the form of larger fields with very straight boundaries where possible and is representative of later 19th Century agricultural trends. The northeast boundaries of the proposed turbine field are depicted on the 1880 map with most of the field area shown as rough pasture crossed by a number of tracks. An area of spoil associated with Wheal Busy is shown at the western edge. By 1907 the tracks have been realigned around the perimeter of the newly formed proposed turbine field. It has presumably been improved as it is no longer shown as rough pasture. To the west Wheal Busy's spoil heaps are now shown as rough pasture indicating the reclamation of mining land for farming.

4 Project aims and objectives

The principal aims were to (Goacher, H. 2012):

- Draw together the historical and archaeological information about the site.
- Identify from planning records the location and type of turbine applications already consented (this information is available in GIS form from the Historic Environment Record team)
- Review and analyse historic map evidence for the site.
- Inform whether archaeological recording of any extant remains is required.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.
- Produce 'statements of significance' for all designated historic assets, that are identified as potentially impacted on by the current proposals. Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local'.
- Apply recently published EH guidance on the assessment of the setting of Heritage Assets.

5 Method statement

5.1 General methodology

AC complies with the guidelines set out in the IfA's Standards and Guidance and follows the IfA code of conduct.

5.2 Desk-based assessment (DBA) and walk over survey

An initial DBA concentrated on the Sites and Monuments Records (SMR), Cornwall Historic Environment Records, sources at the Cornwall Records Office and a map regression exercise.

A walk over survey recorded extant visible remains on the site. Designated sites within a two kilometre radius were also considered allowing the existing plan to be annotated with archaeological detail and the impact of the proposed turbine to be assessed. Other relevant sites within a one kilometre radius and included on the Historic Environment Record were similarly considered.

The potential intervisibility between sites and the proposed wind turbine was evaluated using a combination of visiting the locations or the nearest right of way to them, vegetation assessment, line of sight assessment, a study of map contours and a Zone of Theoretical Visibility map (Figure 8).

Selective scaled digital colour photography was used to facilitate interpretation and to illustrate the report. Photographic montages (courtesy of CEC, Plate 2; Plate 3) demonstrating the potential visibility of the proposed turbine were also employed to aid decisions on the magnitude of impact the proposed turbine will have.

Selective scaled digital colour photography was used to facilitate interpretation and to illustrate the report.

5.3 Impact Assessment

A gazetteer of designated heritage assets within 2km and relevant heritage assets within 1km of the site includes an assessment of their significance (Figure 7). Studies have been undertaken to identify the locations of current and proposed wind turbines within a 5km radius and the specific nature and impact of the turbine proposed for the site. This includes consideration on the construction, use and end-of-life impacts of the turbine. The cumulative impact of these turbines on the heritage assets has been considered to enable further recommendations and planning decisions to be made.

5.4 Report

The discussion element of the report specified in the WSI is incorporated into the gazetteer and impact sections below. This archive report describes the results of the archaeological assessment. Copies of the archive report will be submitted to: the client; the County Historic Environment Record (HER); Cornwall Record Office; National Monuments Record (NMR) in Swindon and all significant contributors where (with the exception of the client's and contributors' copies) they will be available for public consultation. The report will additionally be uploaded to the online OASIS grey literature library where it will be available to the general public.

5.5 Archive

The archive will be of a documentary nature and will be deposited in a suitable form with the Cornwall Record Office, within six months of the completion of the final report and confirmed in writing with the HEPAO.

6 Results

Sites of archaeological significance identified within the study area are located on the gazetteer map, numbered from 1-126 (Figure 7). (NB. Site Number 99 was not used.)

The significance of each site is graded as follows:

WHS- World Heritage Site

S Scheduled Monument

L Listed Building

A Site of National Importance

B Site of Regional Importance

C Site of Local Importance

D Natural Feature or non-antiquity

The condition of each site was assessed during the walk over survey from 1-4:

1 No surviving remains evident above ground

2 Poor preservation

3 Fair preservation

4 Good preservation

Where it was not possible to visit a specific site its condition was assumed from its designation or SMR entry, indicated with the prefix 'A'.

In addition to the above descriptors the Overall Impact is determined using the combined result of a Sensitivity rating and Magnitude of Impact rating (DMRB Vol.11; 2/1-5).

The Sensitivity ratings are:

Sensitivity Rating	Typical Descriptors
Very High	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale and limited potential for substitution.
Medium	High or medium importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Table 1 Sensitivity Rating descriptors

The Magnitude of Impact ratings are:

Magnitude of Impact rating	Typical Descriptors
Major	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
Moderate	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
No Change	No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Table 2 Magnitude of Impact Rating descriptors

The sites have been given one of five Overall Impact grades in advance of any recommended mitigation measures; from Very Large which approximates to damage and loss of the site's integrity and which represents a key factor in the decision-making process, to neutral which equates to no perceptible effects (DMRB Vol.11; 2/1-5).

The full scale is:

Impact Category	Typical Descriptors of Effect
Very Large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Slight	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Table 3 Overall Impact descriptors

Excerpts within the descriptions are taken from the relevant SMR, Listed Building or Scheduled Ancient Monuments records. Information within the brackets refers to sources used in the compilation of, and listed at the end of, the SMR/LB/SAM records.

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
1	Great Wheal Busy Engine House and Mining Buildings DCO1689 MCO12146 MCO25208 SAM32992 (Plate 7)	78566 43484	Scheduled Monument citation: "Despite limited disturbance, the remains of Wheal Busy survive well. The complex of earthworks in the eastern area of the monument, and the Brunton calciner, are particularly well preserved. The various structures and earthworks represent well the range of mining activity here, and its development over time. The eastern complex is of outstanding importance for its visual impact and significance as a mining landscape; the pits and shafts illustrating the scale and methods of 18th century mining, and the reservoirs and leats showing the lasting importance and management of surface water resources. There is also great potential for buried remains associated with pioneering water, horse, and steam powered engines; the earliest of the series of major steam engines employed on the mine being sited within the monument. Overall, Wheal Busy provides an excellent example of a larger Cornish copper mine, which had a prolonged impact on settlement and transport patterns in the area." Area of heathland with mines, waste heaps and other workings visible. Majority of turbine will be visible and audible from a most areas of the site.	17 th -20 th Century	WHS S	3	Very High	Minor	Moderate Negative
2	Wheal Busy NC Chapel and Sunday School DCO5829 MCO32157 MCO32159 LBS473911	73823 45234	Listed Building citation: "Wheal Busy Chapel, attached walls, gate- piers and railings II* Bible Christian chapel. 1863 datestone. MATERIALS: killas rubble with granite dressings; grouted scantle slate roofs with pierced and crested red clay ridge tiles and end finials; cast-iron ogee gutters and downpipes. PLAN: small rectangular aisle-less plan plus later C19 porch in front of original doorway; gallery to ritual west end. EXTERIOR: single storey; symmetrical 2-window front. Segmental brick arches over original 6/9-pane hornless sashes at both front and rear. Gable-ended porch has open braced truss as barge board over granite name and date panel with relief inscription. Basket-arched doorway has leaded overlight and pair of panelled doors; flanking leaded sidelights and	19 th Century	WHS L Grade II*	Unknown	Very High	Minor	Moderate Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>side buttresses. INTERIOR: unaltered interior with plaster ceiling cornice and roses; panelled dado and panelled gallery front carried on brackets and the gallery supported on slender columns; L-plan staircases with stick balusters and turned newel posts. The original round-arched doorway has a spoked fanlight over pair of panelled doors. FITTINGS: there are box pews in both the gallery and in the central area below, plus space for loose fittings at either side. There are also box choir and leaders' pews ramped up on either side of the communion area and rostrum. The pews and other fittings are panelled, the lower pews have open balustraded friezes at the front and sides including the doors. The communion area has similar detail to its front and to a communion rail in front of the rostrum. There is a loose leaders' bench in front of this. The rostrum has a projecting panelled centrepiece with arched panels and a moulded cornice. There is a tall turned balustrade on either side with rounded corner to the right and a straight-flight staircase to the left. The handrail is surmounted by 2 turned lamp standards. SUBSIDIARY FEATURES: on either side of a garden court at the front of the chapel is a slurried rubble wall with gabled coping. At the front of the courtyard are low granite coped walls surmounted by ornate cast-iron railings. The central gateway has square granite piers and a fine cast-iron gate, and there is a cobbled path which leads to the front door of the chapel. This is arguably the best surviving complete example of the simple type of wayside chapel in Cornwall and one of only 6 examples of its type to retain all the original fittings. The unusual and beautiful fittings are quite remarkable."</p> <p>Site not accessible, private land.</p> <p>Similar contour height to turbine field but significant vegetation and buildings should provide at least a partial screen. Depending on density of the vegetation the upper part of the turbine may be visible.</p>						

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
3	Wheal Busy Smithy DCO5839 MCO9070 LBS492506 (Plate 6; Plate 7)	7388 4475	Listed Building citation: "Former blacksmith's and workshop. Built c.1872 for Wheal Busy Mine. EXTERIOR: A tall single storey building of random granite rubble with granite quoins and some modern repairs of brick and block work in places. A large and impressive, hipped scantle slate roof with ridge tiles. The tall central stack for the furnace has a lower stage of stone and upper of brick. The front elevation has cart entrances at either end; the one to the right is arched and has brick dressings, whilst that to left has a granite lintel. Two further doorways and a window opening are positioned in the central part of this elevation. An extension to the right is of rubble stone with a single pitch roof. Map evidence indicates that there was a further extension to the left but this, with the exception of a low projecting stone wall, has been demolished. There is a particularly fine cast iron lintel above the right side entrance to the building bearing "GREAT WHEAL BUSY MINE 1872", cast by Perran Foundry, near Truro, and a further cast iron lintel to the rear entrance. INTERIOR: Two internal bays, formed by a partition wall of rubble stone and the base of the chimney, and open to roof. It has a tie beam hipped roof with angle struts. The purpose-built forge dominates the larger space and is constructed of granite rubble that has been lime-washed. HISTORY: From the early C18 this area of Cornwall became the focus of intense mining activity and Wheal Busy was the site at which James Watt introduced some of his most historical improvements in steam engine design. In its heyday, Wheal Busy was a major employer and the mine's existence greatly contributed to the development of the village and new parish of Chacewater. It also influenced the development of regional transport networks, using a pioneering horse-drawn tram road for the transportation of copper and tin ores. Mining was suspended at Wheal Busy in 1873, although arsenic was produced at the site during the late	19 th Century	WHS L Grade II	2	Very High	Minor	Moderate Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>C19 and early C20. Wheal Busy is located within the Gwennap-Chacewater mining district, one of the World Heritage Site Bid Areas for Cornish Mining. ASSESSMENT OF IMPORTANCE: The smithy at Wheal Busy is a remarkably well surviving example of this type building and is perhaps one of the largest blacksmith's workshops in the country. Together with the ruined structures and earthworks of the mine (which are protected as a scheduled monument), it represents some of the wide range of activities associated with extractive mining in Cornwall. As well as being of special interest both historically and for its completeness, it also has a considerable visual impact within the landscape, and has strong group value with the mine's engine house and chimney (qv)."</p> <p>Building relatively complete with modern repairs, all openings are blocked, the roof is substantially dilapidated.</p> <p>Located in open area near Wheal Busy mining cottages and engine house. Considerably downslope of turbine though at least the top should be visible.</p>						
4	Arsenic Calciner DCO5782 LBS63184	73841 44537	<p>Listed Building citation: "Arsenic calciner ruin with condensing-chamber ruins and chimney. Circa 1908. Killas rubble, granite quoins and bonding stones, St Day brick arches, vault and upper stage of chimney. Square on plan calciner to east linked 2 rectangular chambers to east in turn linked to series of about 40 condensing-chamber by baffled flue system leading to circular chimney to west. Main calciner furnace has brick vault from east to west on ground floor, brick arch to south side and 1 small angled opening over to left leading to brick domed vault. 2 similar angled openings with iron door frames to north side and central hearth. The whole structure is reinforced by iron tie rods and plates. Adjoining chamber (west) has series of square holes leading to next chamber ie. flue and has evidence for</p>	20 th Century	WHS L Grade II	Unknown	Very High	Minor	Moderate Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>floor structure just above. Narrow flue, then further rectangular chamber with construction possibly further furnace at south end and entrance from north. The system of condensing-chamber is very ruinous as the St Day brick vaults have been removed. The first few condensing-chamber had brick baffle walls but only the stone baffle walls and continuous rear (north) wall survive. Tapered chimney is complete with stone rubble lower stage, corbelled brick collar and brick collar cornice to brick upper stage. The best surviving example of an arsenic processing system.”</p> <p>Chimney of granite and brick construction is still standing. Surrounded by dense heathland vegetation with remains of calciner not visible or accessible in the scrub. Part of a landscape of tall mining buildings.</p> <p>Located considerably downhill from turbine, but chimney is intervisible from site and it is likely that the majority of the turbine will be visible depending on the height and density of vegetation.</p>						
5	Milestone DCO5555 MCO48492 LBS63104	73444 44461	<p>Listed Building citation: “Milestone. Probably early C19 or recut circa early C19. Painted granite. Rectangular on plan. Round-headed monolith with incised inscription of 'FROM TRURO 6 MILES', in upper case with serifs. Benchmark to west side.”</p> <p>Not located. Area surrounded by quite dense shrubs and heathland extending over Wheal Busy. Next to a busy road.</p> <p>Likely that the majority of the turbine would be visible.</p>	19 th Century	L Grade II	Unknown	High	Negligible	Slight Negative
6	Killifreth Mine Boiler and Engine House DCO3919 MCO52614 LBS63095	73587 44252	<p>Listed Building citation: “Beam engine house ruin with attached chimney and ancillary ruins. Circa late C19. Killas rubble with granite quoins, jambstones and bonding stones. Round stone rubble chimney with brick upper stage (north west) and round-headed brick arch to bob wall. Otherwise timber lintels. Rectangular plan with ruins of rectangular building to north and further ruined engine</p>	19 th Century	WHS L Grade II	3	Very High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			house to west. Main engine house has no floor, roof or timberwork over bob wall but stone walls are fairly intact except west gable which has fallen. Chimney has corbelled brick collar. Killifreth Mine was re-started in 1865 and engines were installed so that greater depths could be worked, and presumably this engine house is part of the new scheme. Killifreth at this time was also linked to Great Wheal Busy and Wheal Unity Wood." Surrounded by mature but low level deciduous trees and shrubs in a landscape dominated by other mining chimneys. Turbine is likely to be visible from most aspects. A domestic scale turbine is already visible from this location.						
7	Killifreth Engine House DCO3918 MCO52613 LBS63094	73391 44182	Listed Building citation: "Ruined engine house for beam engine with attached chimney. Circa 1865, chimney, heightened probably circa 1900. Granite rubble and killas; granite quoins and jambstones and brick arches and brick upper part of round chimney to north east corner. 1-cell rectangular plan with round chimney attached to north-east corner. Originally with 3 floors. All walls virtually intact. Thicker south bob wall to second floor level with deep dressed granite wallplate, originally timber framed above clad in weather boarding. Round-headed opening to ground floor. North gable wall has similar brick round arched opening to ground floor and smaller round-headed arched window openings to first and second floor. 2 square openings for second floor beams. Smaller round-headed window openings to east and west walls. 2-stage chimney has moulded brick collar over stone first stage and remains of moulded collar to later part of upper stage. The shaft is named after the purser of 1865, a Mr Edward Hawke, Jun., Tregullow. There were no returns in 1864 but by 1865: "The Company have very recently resumed the works, which were suspended a year a two. They are sinking the engine shaft, which will intersect the lode at a depth of about 70 fathoms". (Statistics and	19 th Century	WHS L Grade II	3	Very High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			observations by Thomas Spargo 1865). The chimney of this engine house, since heightening circa 1900, is the tallest surviving chimney in Cornwall.” Surrounded by mature but low level deciduous trees and shrubs in a landscape dominated by other mining chimneys. At least the top of the turbine will be visible from most aspects. A domestic scale turbine is already visible from this location.						
8	Killifreth Engine House DCO5780 LBS63178	73723 44286	Listed Building citation: “Beam engine house ruin with attached chimney. Mid-late C19. Killas rubble with granite quoins jambstones and bonding stones. Brick arches. Round rubble chimney with brick upper stage (south side). Gable end to west. Rectangular, single-cell plan with attached round chimney to west of south wall. 3 storeys (now floorless). Bob wall to east. All openings with round arches including holes for second floor beams which were originally cantilevered over shaft. Walling intact. Roof and framed and weather boarded upper part of bob wall missing. Chimney has corbelled brick collar and cornice. Killifreth Mine and Great Wheal Busy were developing contiguously from 1865 and shafts were being sunk to greater depths. This engine house is part of the scheme.” Surrounded by mature but low level deciduous trees and shrubs in a landscape dominated by other mining chimneys. At least the top of the turbine will be visible from most aspects. A domestic scale turbine is already visible from this location.	19 th Century	WHS L Grade II	3	Very High	Negligible	Slight Negative
9	Killifreth Mine Chimney DCO3874 LBS63179	73778 44350	Listed Building citation: “Mid-late C19. Killas and granite with brick upper stage. Round on plan. Tapered towards top with corbelled brick collar and cornice. Killifreth Mine and Great Wheal Busy were being expanded, from 1865 and this chimney is part of that development.” Surrounded by quite mature but low level deciduous trees and shrubs. At least the turbine blades will most likely be visible. One domestic scale turbine visible from this	19 th Century	WHS L Grade II	3	Very High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			location.						
10	Salem / Hornblowers Cottage DCO5779 LBS63176	74056 44175	Listed Building citation: "Farmhouse adjoining and cottage. Early C18 cottage and later C18. Killas elvan and granite rubble with elvan and granite quoins and sills. Rendered cob to first floor of front. Corrugated asbestos roof over farmhouse and dry slate over cottage all swept lower to rear, all originally thatched. Brick chimneys over gable ends and over party wall. House has 2 room, central stair plan with narrow cellar to rear. Cottage is 1-room plan remodelled 1985. 2 storeys. East front overall 3-window range. 2-window front to farmhouse and 1-window front to cottage. House has C20 windows with top-opening lights. C20 2-light casements to cottage. House has doorway off-centre to right and cottage, later, has doorway to far left adjoining original corner of house. Both have C20 doors. Interior of farmhouse is little altered with original floor and circa early C19 roof structure. Cellar to rear is partly below ground level. The home of Joseph Hornblower, partner of Thomas Newcomen, in 1725 and of his son Jonathan, 1745-73, and younger son Josiah (who later introduced steam engines to the American colonies)." Not accessible, private land. Located near a busy road in the bottom of a valley with mature deciduous trees providing a screen. Only the top of the turbine may be visible depending on the density and height of vegetation.	18 th Century	WHS L Grade II	A3	Very High	Negligible	Slight Negative
11	Upton Grove DCO4335 LBS63151	74495 44350	Listed Building citation: "Villa and outbuilding to rear. Circa mid to late C19. Rusticated stucco to front with painted rubble to sides and some brick to rear. Hipped scantle slate roof with slightly projecting eaves with 5 alternate crested and pierced clay tiles to ridge. Rendered brick chimneys over side walls and further chimney to rear wall. Symmetrical 4-room double-depth plan, with principal room on either side of entrance hall with service rooms at rear, and small projecting bay on	19 th Century	L Grade II	3	High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>each side. Single storey. Symmetrical 2-window south front with flanking 1-window wings set back towards rear. Central doorway with pair of top-glazed doors. Contemporary canopy porch or verandah with shaped fascia and central gablets supported on turned cast iron stanchions. Plinth and quoin strips otherwise simulated ashlar. Original hornless sashes with marginal panes to front and original hornless 12-pane sash to front of each wing. Cast iron ogee gutters. Interior not inspected but said to be unaltered. Painted rubble and scantle slate roofed outbuilding to rear with doorways and small ventilator windows. Rectangular on plan. Built into bank to rear. This is an unusual single-storey C19 house in a remarkably unaltered condition.”</p> <p>Not accessible, private land.</p> <p>Located near a busy road in the bottom of a valley with mature deciduous trees providing a screen. It is unlikely but the top of the turbine may be visible depending on the density and height of vegetation.</p>						
12	Woodside DCO5756 LBS63150	74873 44342	<p>Listed Building citation: “House, originally 2 houses. Circa mid-late C18 remodelled and extended in circa late C19-early C19. Elvan ashlar front with killas rubble to sides and some slate hanging to rear. Mostly dry Delabole slate roofs with brick chimneys over gable ends, 1 rendered axial stack and brick chimney over end wall of hipped rear wing with scantle roofed lean-to beyond with further brick chimney. Originally small 1-room plan house with entrance to 1 side and larger 2-room house with central entrance. Converted to 1 house circa late C18 with stair turret added or remodelled to rear, left of middle, and rear wing added to larger part right plus further C19 lean-to beyond and C19 lean- to to right. 2 storeys. 5-window north front with old 16-pane hornless sashes and much crown glass and internal fielded-panelled window shutters. Entrance in 2nd ground floor opening with original 6-panel door with fielded panels and overlight. 4th</p>	18 th -19 th Century	L Grade II	3	High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>ground floor opening now with 16-pane hornless sash but was entrance to larger house. Plinth. Slightly cambered elvan arches over openings with projecting bracket moulded keystones. Moulded cornice under rendered parapet with plan coping. Round-headed possibly original sash to rear with wide glazing bars stair turret. Interior Partial internal inspection of middle front room and stair hall. Middle room has C18 moulded plaster ceiling cornice and eared fireplace surround. Stair hall has open-well closed-string stair with stick balusters on plinths and C18 moulded ceiling cornice. Further original or old features may survive in other parts of the house. This house has unspoilt elevations to all sides and appears to retain most of its internal plan and features.”</p> <p>Not accessible, private property.”</p> <p>Screen of mature trees surrounds property which is located on the side of a valley facing the turbine site. At least the top of the turbine may be visible from some aspects.</p>						
13	1-5 High Street, Chacewater DCO3911 LBS63170	74962 44382	<p>Listed Building citation: “Terrace with shopfront, now house. Early/mid C19. Killas rubble walls with cambered brick arches with projecting keystones over most openings slate-hung first floor to right-hand end. Asbestos slate roofs with brick gable and axial chimneys hipped to right. Projecting eaves with shaped wooden brackets. Mostly 1-room double depth plans. 2 storeys. Regular 9-window north street front. Nos 1, 2 and 3, left have 4-paned horned sashes. Nos 4 and 5 have original 12-pane hornless sashes with wider central lights. Entrances to left or right all with C20 doors. Near centre, No.2 has wooden shopfront, the shop window now blocked and with sash window inserted, flanked by 2 pilastered doorways with traceried fanlights, the right-hand doorway wider and divided into 2 entrances. An entablature continues over the whole feature. Single storey 1-room addition with tapered room under flat lead</p>	19 th Century	L Grade II	2	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>roof to far right on street corner was further shop, now with C20 window. Slatehanging over with original 12-pane hornless sash. Interiors not inspected. Chacewater is notable for the survival of many C19 shopfronts, and this shopfront, although altered, is an interesting example.”</p> <p>Five terraced houses with modern alterations including PVC windows, re-pointing and extensions. Constructed predominantly of slate though fabric very soft and considerably eroded probably as a result of pollution. Located next to a busy road within a valley and developed area. Turbine will not be visible.</p>						
14	Chacewater School and House DCO4332 MCO51322 LBS63149	75027 44227	<p>Listed Building citation: “National School and schoolhouse built originally in 1848 (PRO) was altered and enlarged in 1861, 1878/9 and 1896/7. The first north western extension was added by William White in 1861, the south western extension was added by James Hicks in 1878/9 and finally the further extensions to the north western wing were the responsibility of Silvanus Trevail who prepared his designs in 1896. The school was transferred to the School Board in 1876. Elvan ashlar to front with granite window frames and mullions, otherwise killas rubble with some freestone and granite dressings. Dry Delabole slate roofs with crested clay ridge tiles. Rendered brick axial stacks flanking schoolhouse and stone lateral stack of 1861 to rear wing south wall to east end. Tudor style. Originally a symmetrical plan of central 2-room 2-storey schoolhouse to north and boys schoolroom to south and with gable roofed porch at each end. Girls schoolroom porch removed and rear wing added 1861; further wider wing added to rear of boys schoolroom for Infants and small wing in angle between 1861 wing and schoolhouse in 1878/9 and further classroom for boys added to west of 1861 wing and girls classroom added to west of adjoining wing in 1896/7. Single storey except for 2-storey schoolhouse.</p>	19 th Century	L Grade II	3	High	Minor	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>Symmetrical east front of 3:1:3 bays. Continuous plinth. Central coped gable ended projection of schoolhouse with datestone 1847 surmounted by bellcote. Cusped kneelers. Ground floor has central canted bay window with flat roof and 2-light window with hoodmould over. Both with central mullions removed when present circa early C20 glazing inserted. Each schoolroom has central narrow window originally with central mullion and flanking wider windows retain central mullions but intermediate mullions removed. Original porch survives to south end but north porch replaced 1861 by 2-light freestone window with cusped lights, plate tracery and pointed hoodmould. Similar window to gable end of 1861 wing. Interior roof mostly obscured but scissor trusses to 1863 wing. Schoolhouse interior has open beams.”</p> <p>External front layout preserved including inscription and pig motif. Most windows replaced with modern replica versions. Internal spaces/uses much altered and with considerable modern extensions to rear.</p> <p>Probable that the turbine will be visible from some rear aspects of the school depending on vegetation density.</p>						
15	<p>Church of St Paul DCO5547 LBS63147</p> <p>St. Pauls Church Lych Gate DCO3904 LBS63148</p>	<p>75092 44073</p> <p>75077 44101</p>	<p>Listed Building citation: “1828 when parish was created out of Kenwyn. Rebuilt 1892, except for tower, to a design by Edmund Sedding of Plymouth. Elvan ashlar and killas, some granite and Polyphant stone dressings. Dry Delabole slate roofs with gable end over east end, adjoining tower at west end plus lean-to aisles to north and south below clerestorey. Restrained Perpendicular style outside, pointed inside. Nave and chancel under 1 roof, west tower, north and south aisles. West entrance front of central 4-stage embattled tower, the second highest in Cornwall with strings dividing stages of diminishing width. Octagonal embattled stair turret to east of north wall rising to higher level. Blocked tower doorway with Perpendicular style Polyphant stone tracery in tympanum of 4-centred arch. Over doorway in 3rd stage</p>	19 th Century	L Grade II	4	High	Minor	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>is early Perpendicular style 2-light granite window with hoodmould. Similar windows to upper stage with slate louvres. Similar doorway to each aisle flanking tower with 4-centred arch and original 1892 doors. North and south walls of aisles have 1:2:1 bays with 2 central bays broken forward with chamfered corners. Each bay has 3-light flat-headed Perpendicular style windows, those to end bays having hoodmoulds. Trefoil headed lights with original 1892 coloured glass. Similar window to east end of south aisle. Chancel has slightly projecting gable with 5-light limestone window from St Mary's Church Truro, installed by Pearson and with original glass circa mid-late C19. Central figure of Jesus flanked by Saint Philip, Saint John, Saint James the Less and Simon the Zealot. East end of north aisle has doorway like recess with glazed Perpendicular style Polyphant stone tracery in tympanum of 4-centred arch. Clerestorey of nave and chancel has 5 small arch headed windows to north and south. Vestry doorway to east end of south aisle is later insertion. Interior is restrained with exposed killas rubble walling. 5-bay arcades between nave and north and south aisles with octagonal Polyphant stone piers and pointed granite arches. Pointed arch between chancel and alter projection. Pointed rubble tower arch. 1892 waggon roof over nave and chancel. 1892 fittings of Perpendicular style painted freestone font; octagonal pulpit of polychrome polished Serpentine with open arcade on turned shafts, carved lecturn of figure of Saint Paul by Harry Hems of Exeter and simple pitch pine pews with blind arcade carving to ends. Earlier oak and mahogany grained boards in Gothic style within tower, pointed with The Lords Prayer, The Creed and The Ten Commandments. 1 original bell in tower."</p> <p>Listed Building citation: "Lych gate. Probably circa 1892. Elvan ashlar and killas rubble. Dry Delabole slate roof and slate-hung south gable end. Rectangular plan with</p>						

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			benches to east and west and central elvan and granite coffin rest. Entrances to north and south. North entrance in coped gable end of elvan ashlar has 4-centred arch of elvan voussoirs. Gable is surmounted by octagonal finial with moulded pendant base and moulded cornice surmounted by latin cross.” Surrounded by mature trees. However church tower is a competing tall structure and focal point in the landscape. Existing turbines are visible from this location. Turbine is unlikely to be visible except from upper sections/top of tower.						
16	Chacewater House DCO5755 LBS63146	75015 43990	Listed Building citation: “Circa 1832 and extended circa 1840’s. Stucco over stone rubble. Steep dry Delabole slate roof with gable ends and projecting verges at south west end at right angles to dry. Delabole slate roof at lower level and at lower pitch with rendered brick chimney with 3 flues over gable end to north east. Rendered lateral stack over south west wall with slightly projecting breast. Hipped lean-to scantle slate roof over single storey entrance and larder to north east. Originally 2-room double depth plan with stair approached by axial passage between front and rear rooms from entrance at north east end. Extended to south west circa 1840’s in Tudor style by rectangular room with butlers pantry to rear with cellar under. 2 storeys plus attic. 1- and 2-window south east front with gable end of Tudor style extension left with plinth and rusticated stucco quoins. Original 4-light canted hipped-roof and mullioned bay window with original 15-pane fixed lights. Opening over with hoodmould and originally with central mullion but now with horned 16-pane sash. Original oculus window over with wheel,glazing. Earlier part to right with projecting stuccoed keystones over openings and later 16-pane horned sashes. Entrance front to north east has Victorian conservatory left with arched door with Gothic glazing. To right of conservatory is circa 1840’s 4-centred	19 th Century	L Grade II	3	High	Minor	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>arched window opening within painted rubble walling and with original traceried window with central mullion and arched lights. Interior retains original features of both the circa 1832 and circa 1840's periods of: panelled doors; dog-leg stair with mahogany handrail over stick balusters and turned newel and curved balustrade over well. Ground floor room to south west has moulded and carved ceiling band and roll moulded architrave surrounding bay window. Garden ornaments include Victorian letter box and lamp-post."</p> <p>8-10 foot high sandstone boundary wall with gothic arches and detailing, house not accessible as private land.</p> <p>Wall and mature evergreen trees provide substantial screen meaning that turbine is unlikely to be visible from most aspects. At least the top of the turbine may be visible from upper storeys as this is a hilltop location.</p>						
17	Sunny Corner Nurseries DCO3876 LBS63182	75116 44399	<p>Listed Building citation: "Market. Early C19. Killas rubble with elvan ashlar jambs and voussoirs and granite columns with freestone capitals. Asbestos slate roof. Rectangular plan facing open courtyard. Re-erected circa 1970, colonnade supporting monopitch roof with solid original back wall against road, west. Original wide entrance to north end with elliptical stone arch. 5 salvaged Doric columns have slight entasis and 4 have moulded capitals. C20 roof structure."</p> <p>Located next to a busy road within a valley and developed area. Turbine will not be visible.</p>	19 th Century	L Grade II	3	High	No Change	Neutral
18	14-19 High Street, Chacewater DCO5761 LBS63174	74956 44401	<p>Listed Building citation: "Terrace of 6 houses. Early/mid C19. Killas rubble with cambered brick arches over windows and elliptical brick arches over doorways, all with projecting keystones. Original grouted scantle slate roofs over Nos 16 and 19, otherwise asbestos slate. Brick axial stacks over party walls and to gable end, left. No 14 has 2-room double depth plan otherwise 1-room double depth plans. 2 storeys. Overall 13-window range. No 14</p>	19 th Century	L Grade II	2	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			has 3-window south street front with central window blind. Original 16-pane hornless sashes and central doorway with original 6-panel door. Nos 15 - 19 have 2- window fronts with doorways to left or right. All with sashes and original 16-pane hornless sashes to Nos 16, 17 and 18. No 15 has wider ground floor window with tripartite sash. Old 4-panel door survive to No 17 and 19. Interiors not inspected. Included for group value.” Located next to a busy road within a valley and developed area. Turbine will not be visible.						
19	42-43 Fore Street, Chacewater DCO5760 LBS63169	75153 44466	Listed Building citation: “Pair of adjoining houses originally with shopfronts. Early C19. Squared and coursed elvan and killas with elvan quoins, jambstone and voussoirs. Asbestos slate roof, hipped to left, with brick chimneys over party wall middle and right and lateral chimney over rear wall left. Each house is 2-rooms wide with central stair and originally with shop in left-hand room of each plus narrow rooms to rear. 2 storeys. Overall symmetrical 6-window range. Each house has 3-window south street front. All later 4-pane sashes with horns probably contemporary with partial blocking in of shop windows. Plinth and mid-floor string course. Each house has original round-headed central doorway with fanlight. C20 door, left, and 4-panel door, right. Angle window in former shop door position to left corner. Fascia positions of shop windows now cemented. Other windows in original openings with slightly cambered arches with projecting keystone.” Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
20	Lower Kerley Farmhouse DCO3926 LBS63103	75467 44101	Listed Building citation: "Farmhouse, formerly house with 2 cottages. C18. Painted rubble and cob with corrugated iron roof, originally thatched. Gable and axial brick chimneys. Originally a 2-cell central stair plan plus single cell cottage with side entrance adjoining to left. Circa C18-C19 one cell addition to right partly built into hillside and possibly originally used as store and dairy or some semi-domestic function. 2 storeys. Overall irregular widely-spaced 4-window range. The house at centre has slightly irregular 2-window front with central doorway and is flanked by 1- window fronts of the cottage and store each with doorway near party walls. C20 doors in original openings. Central house has gable porch with shaped bargeboard and 4-pane 2-light casements. Cottage, left, has old 12-pane 2-light casements and cottage, right, has 2-light casement to ground floor and window with vertical glazing bars and random glass to first floor. Ground and roof slope down to left. Interior said to be little altered with original floors and roof structure." Not accessible, private land. Located on top of hill and likely to have a very good view of most of the turbine.	18 th Century	L Grade II	A3	High	Minor	Slight Negative
21	Tresize Farmhouse DCO4328 LBS63142	75600 44057	Listed Building citation: "Farmhouse formerly house with cottage. Circa late C18 to early C19. Painted and rendered cob with some slate-hanging to first floor of front and gable end, right. Wooden lintels. Corrugated asbestos roofs on 2 levels plus lean-to porch and brick chimneys over gable end right over large external breast and over party wall. 2-room central-stair plan plus full width rear outshut to house and 1-room side entry plan to cottage. 2 storeys. Irregular 1-window front to cottage, left, and symmetrical 2- window front to house. All 4-pane sashes. Planked doors. Slate sills. House has large central lean-to porch probably C19. Interior is little altered with original stairs, floors and roof but structural features are hidden by later ceilings."	18 th -19 th Century	L Grade II	A3	High	Minor	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			Not accessible, private land. Located on top of hill with a direct view of most of the turbine.						
22	39-40 Fore Street, Chacewater DCO4342 LBS63168	75121 44450	Listed Building citation: "2 houses. Mid C19. Stucco over studwork to front. Hipped asbestos slate roof with wide eaves and brick chimneys over side walls. Left-hand house wider but both houses are 1-room wide and 2-rooms deep with adjoining entrance passages leading to stairs. 2 storeys. Regular but not quite symmetrical 4-window south street front. Plinth and rusticated quoin strips. Pair of doorways slightly to right of middle with narrow pilasters and 3 carved consoles supporting moulded hood. Windows are 12-pane sashes. First floor has original hornless sashes within original moulded wooden architraves. Ground floor horned sashes are later replacements." Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	3	High	No Change	Neutral
23	24 Fore Street, Chacewater DCO3909 LBS63163	75006 44417	Listed Building citation: "House with shop. Early/mid C19. Painted render over first floor over shop to front otherwise stone rubble. Asbestos slate roof with brick chimney over gable end, left, and over party wall right. Large 1-room shop with 2 rear rooms. 2 storeys. Symmetrical 3-window south street front with C20 windows replacing original 16-pane sashes. C20 false shutters. Unequal slightly projecting double shop front with 4- lights to left of doorway and 6-lights to right. Doorway has original narrow wooden panelled flanking pilasters. Further doorway to house, left, with plain pilasters. Original fascia over shops and doorways with moulded cornice and shaped bracket to left. C20 doors. Interior is simple. Rear room, left, has stone fire place with cambered brick arch." Fish and chip shop with possible modern replacement or highly renovated shop front. First floor retains sash windows though with modern shutters. Located next to a busy road within a valley and	19 th Century	L Grade II	2	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			developed area. Turbine will not be visible.						
24	33-34 Fore Street, Chacewater DCO3910 LBS63167	75087 44439	Listed Building citation: "House with 2 shop fronts. Mid C19. Stucco over studwork to first floor of front. Pyramidal corrugated asbestos roof. 2-rooms wide and 2-rooms deep with shops to front originally with central passage between shops. 2 storeys. Symmetrical 3- window south street front. Original windows and glass. Ground floor has 2 identical mid C19 double shop fronts flanking central former passage doorway. Each shop front has bowed 2-light windows with elliptically arched lights and curved glass flanking central doorway. Right-hand doorway doorway now a window. C20 doors with small overlights. Narrow wooden pilasters linked to original fascia by carved consoles with cornice over. Terminal consoles are wider. First floor has 4-pane sashes with similar arched lights, pilasters, consoles and cornices." Original design shop front with modern signage and alterations such as doors and amalgamation into one shop. First floor sash windows retain arches. Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	2	High	No Change	Neutral
25	12 High Street, Chacewater DCO3912 LBS63172	74909 44389	Listed Building citation: "House in row. Circa early C19. Killas rubble with cambered elvan arches with projecting keystones. Asbestos slate roof with brick chimneys over shared gable ends. 2-room central-stair plan with service rooms to rear. 2 storeys. Symmetrical 3-window south street front. 4-pane horned sashes. Central doorway with top-glazed 4-panel door. Interiors not inspected." Slate walling has been re-pointed. Retains wooden sash windows though has modern slate roof and threshold replaced with concrete/ cement. Located next to a busy road within a valley and	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			developed area. Turbine will not be visible.						
26	2 The Square, Chacewater DCO3875 LBS63180	75088 44408	<p>Listed Building citation: "Small house. Circa 1820. Killas and elvan rubble with elvan and freestone dressings with cob to part of right gable end and the stud and plaster wall to wing. Scantle slate roof sweeping lower to rear, left, with brick chimneys over gable ends. L- shaped plan of 2 front rooms with central cross passage and stair and 1-room kitchen wing to rear, right and narrow service room to rear left. 2 storeys. Symmetrical 2- window north east road front. Central freestone and elvan ashlar doorway with plain pilasters, moulded impost stones round-headed arch with keystone, architrave and cornice. Top-glazed 6-panel door with blind fanlight over. Rendered plinth and flat dressed stone arches with projecting keystones over windows. Elvan sills. Original 12-pane hornless sashes with mostly original crown glass. Original sashes also to wing and stair and original 16-pane 2-light casement to rear, left. Interior is little altered with original T-plan stair, and mahogany doors with moulded architraves; original floors, bead moulded beams to wing and original roof structure. Blocked borrowed light between right-hand room and passage suggests that front door fanlight has always been blind. Cobbled pavement to front. An interesting example of a small town house with farmhouse plan of rear kitchen wing and integral service room modified and reduced in scale to suit the site."</p> <p>Recently renovated, retaining sash windows. Located next to a busy road within a valley and developed area. Turbine will not be visible.</p>	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
27	1 Station Road, Chacewater DCO4341 LBS63166		Listed Building citation: "Houses with shopfronts on street corner. 1832. Elvan and killas rubble with dressed quoins and jambstone and shallow brick arches with projecting keystones. Asbestos slate and slurried scantle slate roof with wide eaves, street corner hip and brick chimneys over gable ends to west and north and brick axial chimney over party wall. L-shape group comprising originally (-room shop, 1-room house, street corner shop, 1- room house and narrow rooms to rear. 2 storeys. 5-window front to Fore Street (south) and 4-window return front to Station Road (east). South front has house left originally shop with wide ground floor C20 window replacing shop window. Entrance to right with C20 door and overlight. 2 C20 windows over. Second house has C20 window, left, and blocked entrance, right, and original 12-pane hornless sashes over. Original shop window to right complete with 15-panes. Flanking wooden pilasters on plinths with consoles over to original fascia with cornice which continues round to east front. Original 12-pane hornless sash centrally over shop window. East front has similar shop window with doorway to left near corner. Double top-glazed doors with overlight. Doorway to right of shop now with 4-pane horned sash. Further doorway almost adjoining with panelled door and overlight. Ground floor right-hand window and 4 first floor windows are original hornless 12-pane sashes. Cast-iron ogee gutters with cast iron down pipes. Interior partially inspected to view original open string winder stair with curved mahogany handrail and running dog detail." Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
28	22-23 Fore Street, Chacewater DCO5543 LBS63162		Listed Building citation: "2 adjoining houses, formerly with 2 shops. Early C19, killas rubble with elvan quoins, jambstones and arch stones. Asbestos slate roof sweeping lower to rear with brick chimney over gable end, left over party wall right of middle and over party wall shared with No 24. Hipped lean-to roof to roof to left over single storey shop extension. Left-hand house is 2-room central stair double depth plan plus shop to west. Right-hand house originally with shop in front room is 1-room double depth plan. 2-storeys. Regular 2-window and 1-window south street fronts. Left-hand house is symmetrical with central doorway and C20 door. Shop to left has blocked doorway and C20 window, far left. All other windows are 4-pane horned sashes. House to right has doorway left and narrowed window opening, right, with continuous wooden lintel over. C20 door. All other openings have original cambered-arched keyed lintels with projecting keystones. Interiors not inspected." Evidence for re-pointing and modern alterations including replacement doors and window. Retains granite threshold adjoining pavement. Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	2	High	No Change	Neutral
29	10-11 High Street, Chacewater DCO5545 LBS63171	74899 44390	Listed Building citation: "Pair of houses. Circa mid C19. Killas rubble with cambered elvan arches with projecting keystones. Hip to left of asbestos roof over No.10, with brick chimney over side wall, left. Adjoining slurried scantle slate roof over No.II has brick chimney over party wall, left, and gable end, right. Each house has 1-room plan with passage to 1 side and is 2-rooms deep. 2 storeys. Regular 4-window range. Original 12-pane hornless sashes. Each house has entrance to right and ground floor window to left. C20 door to No.10 (left) and 4-panel door with top panels later glazed to No.II, both with overlights." Slate terraced houses retain sash windows with some	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			modern alterations. Number 10 also has a drain constructed across front leading away from door. Located next to a busy road within a valley and developed area. Turbine will not be visible.						
30	3 The Square, Chacewater DCO5781 LBS63181	75089 44390	Listed Building citation: "House with shop. Early C19. Stucco over studwork and some painted rubble to ground floor left side wall. Hipped asbestos slate roof sprocketed for wide eaves supported on shaped wooden brackets. Wide room to left (south) of cross passage with shop to right-hand side and service rooms to rear. Symmetrical 4-window east road front imbalanced by shop front to right. Doorway with C20 door slightly right of middle. Original 16-pane hornless sashes with old glass. Double shopfront to right of doorway has original projecting 4-light shop window bays with sidelights. Original fascia obscured by C20 fascia. Interior not inspected." House with retained shop frontage. Original sash windows and modern inserted front door though generally in good state of repair. Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	3	High	No Change	Neutral
31	Barry's DCO3906 LBS63154	75081 44414	Listed Building citation: "Shop and house on street corner. Early C19. Stucco over studwork. Concrete tiled roof hipped over shop and with brick chimney over gable of party wall of No 4. Tapered plan widening from 1-room shop to 1-room double depth house. 2 storeys. Fore Street front of 4 windows with central doorway and corner shop. The shop front continues around left-hand return with 2 first floor windows above. All original 12-pane hornless sashes with moulded wooden architraves. Moulded hoods on consoles over doorway and ground floor window to right on Fore Street elevation. Shop windows replaced in C20 but retaining fascia with terminal consoles and moulded cornice over. Rusticated pilaster piers over shopfront and similar pilaster between	19 th Century	L Grade II	A3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			house and No 4. Interior not inspected. Chacewater is notable for the survival of many of its C19 shop fronts. This is an interesting example.” On busy road within a valley and developed area therefore turbine will not be visible.						
32	Blackwater Primary School DCO5496 LBS63758	7331 4582	Listed Building citation: “Board school. Datestone 1877 extended circa later C19. Faced killas, elvan dressings and granite quoins. Dry Delabole slate over extension,, otherwise asbestos slate. Gabled roofs, 2 old conically-capped ventilators. Stone lateral stack with brick shafts. Plan: Original school is a U-shaped plan. Probably the principal schoolroom (hall) in the main range with entrance lobbies at either side and a classroom wing at either end projecting forward at the front. Principal entrance has porch in the left-hand inner angle. Circa later C19 class-room wing added on the left of the original left- hand wing. Gothic style details. Exterior: Single storey. Unaltered elevations with original doors. Original wooden mullioned windows and hoodmoulds. Original south-east front has gable end projecting forward on the left and gable end of cross wing projecting forward on the right. Each of these gables has a 3-light traceried window porch in left-hand angle has Y- traceried 2-light window at the front and pointed-arched doorway in its right-hand side. 3-light window with pointed arched lights, right of middle with date plaque in gable over, and on the right near the angle is a pointed arched doorway with a traceried overlight. Later extension on the left has a 3-light pointed arched window under a gable at the front on its right.” Likely to have a good view of majority of the wind turbine due to location on hill and minimal screening from vegetation.	19 th Century	L Grade II	3	High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
33	Blackwater Literary Institute DCO5546 MCO33560 LBS63144	73614 46058	Listed Building citation: "Built for John Passmore Edwards (donor). Killas with granite quoins and sills and brick jambs and arches. Dry Delabole slate roofs, half-hipped ends to front range, otherwise with gable ends. Alternate crested and pierced clay ridge tiles and terminal finials. Polychrome brick chimneys over side walls. Rectangular plan with entrance projection, wing to rear, left (west) with attached room to north. Single storey. Symmetrical 4-window south west front. Plinth and hoodmoulds over openings. Central round-headed entrance in projecting gabled bay with inscribed plaque over doorway. Flanking paired and segmental arched window openings with stopped chamfers. Original segmental arched sashes with marginal panes of coloured glass." 1890 date stone present and retains Victorian/Gothic detailing and stained glass as above. Located next to a main road. The turbine is likely to be quite clearly visible through minimal vegetation.	19 th Century	L Grade II	3	High	Negligible	Slight Negative
34	Chacewater Literary Institute DCO5759 LBS63165	75031 44424	Listed Building citation: "Literary institute and wall to front. 1893. Designed by W.J. Wills for John Passmore Edwards (donor). Dressed rock-faced granite, brought to course, with dressed granite quoins, sills, string, copings, jambstones, mullions and arches. Gable-ended dry Delabole slate roofs with alternate arcaded clay ridge tiles. Plan of 2 main rooms flanking central passage with right-hand (east) room projecting farther to rear. 2 further contemporary small linked rooms to rear of left-hand room and axial passage. Each room has separate roof with ridge at right angles to street except for central roof which is parallel to street and linked to roof of principal room at either side. Single storey. Symmetrical 2-window south street front with slightly recessed central doorway flanked by identical tall gable ends. 3 granite steps to keyed round-headed doorway with pilaster jambs.	19 th Century	L Grade II	4	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>Original pair of 3-panel doors and coloured leaded panes to fanlight. Nowy-headed building name plaque over forming parapet surmounted by scrolled plaque with donor's initials and scrolled pediment with finial, and date within tympanum. Raised numerals and letters. Each flanking gable end has plinth, impost string, gable copings and pedestals with finials over kneeler and ridge acroteria. Central blind quatrefoil over each window. Tripartite windows with stepped round-headed lights and moulded hoods. Coloured leaded glass to tympana with central quatrefoil design. Foundation stone, laid by donor, to left of doorway. Interior is little altered. Arched bracing to roof is carried on granite corbels. Low granite-coped wall with central to front. Chacewater Literary Institute is the second of 4 institutes in Cornwall donated by Passmore Edwards. A strong late Victorian architectural statement in a street with many good C19 buildings.”</p> <p>In a good state of repair with maintenance being undertaken at time of survey.</p> <p>Located on a busy road within a valley in a developed area. Turbine will not be visible.</p>						
35	Chacewater Watering Place DCO3905 MCO56282 LBS63152	75162 44427	<p>Listed Building citation: “Watering place over spring. Circa early-mid C19. Granite and killas. Rectangular on plan divided into 2 sumps. Entrance from west down wide granite steps. Side walls with plain granite copings and taller retaining wall to east of granite ashlar with projecting flat topped coping. C20 tap in wall over left sump and open pipe over right sump.”</p> <p>Given its busy roadside and valley location the turbine will not be visible.</p>	19 th Century	L Grade II	A3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
36	Chacewood Farmhouse DCO3903 LBS63145	75116 43887	Listed Building citation: "Farmhouse. Early C19. Elvan ashlar front otherwise painted rubble walls; half-hipped asbestos slate roof with 4 brick chimneys over side walls flanking hips. 2 storeys plus attic. 4-room plan with principal room on either side of central stair hall and with service rooms at rear forming double depth plan. Symmetrical 3-window east front with original hornless 16-pane sashes. Plinth. Central doorway with original 6-panel door with flush beaded bottom panels and simple wooden doorcase with panelled reveals. Cambered arches over windows with projecting keystones. Hipped extension with lean- to, left, and lean-to store, right. Interior not inspected except for entrance passage leading to open well, open string stair with mahogany handrail." Not accessible, private land. Wall and mature evergreen trees of Chacewater House provide screen. Top of turbine may be visible from some aspects.	19 th Century	L Grade II	A3	High	Negligible	Slight Negative
37	EGM Wyatt DCO4344 LBS63175	74976 44405	Listed Building citation: "House with shop on street corner. Early to mid C19. Stucco over studwork. Grouted scantle slate roofs with hips to right (east) and adjoining party wall, left. Rear roof is parallel to main roof and at a lower level. Brick chimney over party wall, left, axial stack, and further stack over rear wall of front part. 1-room to house and shop plus 2 narrow rooms to rear. 2 storeys. 3-window range. 3 symmetrically spaced first floor 12-pane hornless sashes with moulded wooden architraves. Plinth. Later sash without glazing bars to ground floor left. House doorway at centre with overlight and pilastered doorcase. The entablature above continues to right-hand return over corner shop. The shopfront has 3 elliptically-headed lights on each side and doorway to left-hand on front. The entablature has fascia with dentilled cornice and terminal console brackets, and continues to right on right-hand return over	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			blind wall. C20 canted bay window above on end wall which has stucco rusticated quoins. Rear range east wall has 4-pane window with 2 elliptically arched lights and round- arch headed sash with horns and glazing bars over. Corner, right, splayed for carriage access. Cast iron ogee gutters throughout.” Due to location close to busy road within valley and developed area, the turbine will not be visible.						
38	Killifreth Engine House DCO3921 LBS63097	73639 43572	Listed Building citation: “Beam engine house ruin. Circa mid-late C19. Mostly killas rubble with granite quoins, jambstones and bonding stones and mostly dressed coursed granite facing to bob (south east) wall. Round 2-stage chimney to north corner. Round brick arches over openings and brick upper stage to chimney. Originally with gable ended roof; now roofless and floorless. Rectangular single-cell plan with thicker bob wall to south east and round chimney adjoining north corner. Originally 3 storeys. Walls virtually intact except for what was framed and weather-boarded wall and gable end over bob wall. First and second floor of north west side retain outer frames of original windows. Brick collar divides chimney stages. This engine house, probably for operating a whim, is part of Unity Wood and Killifreth Mines, re-opened in 1865.” Not directly accessible, private land. Located in base of valley close to Unity Wood and a screen of trees. Turbine unlikely to be visible.	19 th Century	WHS L Grade II	A3	Very High	No Change	Neutral
39	Killifreth Engine House DCO3920 LBS63096	73645 43563	Listed Building citation: “Beam engine house ruin. Circa mid-late C19. Mostly killas rubble with granite quoins, jambstone and bonding stones and mostly dressed coursed granite facing to bob (south west) wall. Round 2-stage chimney to north corner. Round brick arches over openings and brick upper stage to chimney. Originally with gable ended roof and 3 floors; now roofless and floorless. Rectangular single-cell plan with thicker bob wall overlooking mine shaft to south east and round	19 th Century	WHS L Grade II	3	Very High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			chimney north corner. Originally 3 storeys. Walls virtually intact except for what was framed and weather-boarded wall to second floor and gable end over bob wall. Some undermining of jambs to ground floor opening of bob wall when machinery removed C20. Wheal Bush was part of Unity Wood and Killifreth Mine. This mine was re-opened in 1865 and this is one of two engine houses in a group, probably for pumping." Not directly accessible, private land. Located in base of valley close to Unity Wood and a screen of trees. Turbine unlikely to be visible.						
40	Reade's Shaft Chimney, Wheal Busy DCO3922 MCO52594 LBS63098	72672 44637	Listed Building citation: "Circa late C19. Killas rubble with granite quoins and some granite jambstones. Brick arches or wooden lintels over openings and brisk upper stage to round rubble chimney to north west corner. Rectangular single-cell plan with attached chimney at corner. 3 storeys originally when floored. Walls complete except for some loss of brickwork to chimney top and loss of framed and weather boarded wall to second floor over bob wall (south). Bob wall has round-headed opening to ground floor. Chimney has corbelled brick collar. Great Wheal Busy is a very old mine, working in 1823 under the name of 'Chacewater Mines' and 'Great Wheal Busy' from 1856. Described in 1865 as having: pumping engine, stamping engine, winding engine and crushing engine." Not directly accessible. Located on the western side of a hill therefore shielded from turbine location by hilltop. Depending on density and height of vegetation, it is unlikely that turbine will be visible.	19 th Century	L Grade II	A3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
41	Reade's Shaft Engine House Chimney DCO3923 MCO52594 LBS63099	72672 44637	Listed Building citation: "Beam engine house ruin. Circa late C19. Killas rubble and brick. Originally rectangular single-cell plan with chimney to northeast corner but now only chimney and some attached walling survives. Originally 3 storeys. Chimney is of rubble to lower stage and brick to upper stage divided by corbelled brick collar. Included for group value." Not accessible, private land. Situated on west side of slope below the crest of a hill and therefore turbine will probably not be visible or audible.	19 th Century	L Grade II	A2	High	Negligible	Slight Negative
42	GJ & PD Lilly DCO5757 LBS63155	75063 44410	Listed Building citation: "Shop premises with living accommodation above. Early C19. Rendered probably over timber studding. Corrugated asbestos roof with gabled end abutting adjoining buildings. Brick stack at left-hand gable end. Originally double-depth plan with shop at front and rooms behind which are now part of shop, and with C20 wing to left. 2 storeys. First floor 2-window range of 4-pane horned sashes. Ground floor has fine early C19 double-fronted shop with bowed 20-pane shop windows either side of shop entrance with glazed and panelled door. To right-hand doorways originally to house, is now glazed with 12-pane window. Shop and doorway retain their flanking pilasters and entablature with fascia bowed out over the shop windows and with moulded cornice over. This is one of the fine C19 shop fronts for which Chacewater is notable." Turbine will not be visible due to location of site within a valley and developed area.	19 th Century	L Grade II	A3	High	No Change	Neutral
43	GJ & PD Lilly DCO4337 LBS63156	75055 44405	Listed Building citation: "Shop premises with living accommodation above. Early C19. Ground storey rendered, timber studding above clad in wooden rusticated boards. Asbestos slate roof with gabled ends abutting adjoining buildings. Large brick stack over party wall to right. 2 storeys. First floor 2-window range and small 4-pane horned sashes. Ground floor, right, wide	19 th Century	L Grade II	A3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			horned sash to shop with 3 panes over 2 panes. Half-glazed C20 door to left. This building is especially notable for its rusticated timber cladding." Turbine will not be visible due to location of site within a valley and developed area.						
44	Higher Whitehall DCO3924 LBS63100	72911 44347	Listed Building citation: "C18, remodelled and extended early C19. Painted render over rubble with slatehanging to gable end right and to exposed part of south gable end of wing. Dry Delabole slate roofs to south and east with rendered brick chimneys over gable ends, hipped gouted scantle slate roof over slate-hung stair turret in angle to rear and C20 flat roof over extension adjoining turret to west. originally probably 2-room plan plus stair turret plus kitchen wing to rear attached to north east corner, 1-room extension, possibly truncated, to left end (west) and further parallel service rooms to rear and finally C20 extension to right of rear wing. 2 storeys. Symmetrical 3-window front plus 1-window addition to left south front. All 16-pane hornless sashes. 3-window original part, right has central doorway and porch with glazed French doors and sidelights. Projecting keystones over ground floor window openings. Wing and rear have 16-pane sashes. Intersecting glazing to pointed arched stair window. Interior has much detail of the early C19 period including open-well open-string stair with wreathed handrail over newel, moulded and carved ceiling band with acanthus over stair, ceiling band with trailing rose to right front room, moulded architraves with corner blocks to most openings, moulded architraves, panelled doors and window shutters. Tapered on plan chimney breast between right-hand room and wing contains fireplace now blocked. Further circular fireplace or possibly oven now blocked in east wall of right room to left of surviving fireplace. This house is said to have been the home of the Hornblowers." Screened by mature trees at front, but on slope facing	18 th Century	WHS L Grade II	3	Very High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			away from turbine site so the turbine is not likely to be visible.						
45	Highlands DCO5625 LBS63859	74117 46603	Listed Building citation: "House and 2 cottages, now one house. Probably C18, extended in the C20. Painted rubble and cob walls. Wheat-reed thatched roof. Brick chimneys over the gable ends and over the cross walls. Large external stack on the right. Plan: Pair of one-room-plan cottages on the left with central rear pantry or stair outshut and 2-room-plan house on the right. Extended in the C20 on the left and behind the right-hand side. Exterior: 2 storeys. Overall 4-window south front. Pair of 1-window front cottages, on the left, with doorway on their right, and symmetrical 2 window front house with central doorway, on the right. C20 doors and windows in C18 openings. 4- pane casements and 12-pane casements." Property not directly accessible as private land. Located down slope with likely screen of evergreen trees. Depending on vegetation density at least the top of the turbine will probably be visible.	18 th Century	L Grade II	A3	High	Minor	Slight Negative
46	Killifreth Farmhouse DCO5766 LBS63102	72952 43894	Listed Building citation: "Circa early-mid C17, extended circa late C17 to early C18, remodelled and partly rebuilt C19. Painted granite and killas rubble walls. Delabole dry slate roofs with gable ends. Rendered chimneys over gable ends of northeast wing. The original early-mid C17 range is a 2-room plan and has been partly rebuilt in C19. An additional 2-room range was built circa late C17 to early C18 at right angles to north east, joined at the corner, and has rectangular stair turret projecting at centre of south east wall. 2 storeys, altered window openings C19. Most openings with 2-light casements, mostly with glazing bars. 2-window southwest front has original central 4-centred arched granite doorway with wide chamfer and ball on pyramid stops. Top- glazed C20 arched door. Further doorway to left within C19 rebuilt part, with C20 top-glazed door and cambered arch over incorporates earlier moulded stone as keystone."	17 th -19 th Century	L Grade II	A3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			Not accessible, private land. Located on the western slope of a hill therefore crest of hill and line of woods along it provide substantial screen. Turbine unlikely to be visible.						
47	Scorrier Mile Post DCO6320 MCO54481 LBS66897	72779 43944	Listed Building citation: "Later C19. Dressed granite monolith. Triangular type, the sides inscribed:- SCORRIER PENRYN STATION 8 M ½ M." Area significantly wooded with deciduous trees and close to busy road. Unlikely that turbine will be visible.	19 th Century	L Grade II	3	High	No Change	Neutral
48	Chacewater Milestone DCO3908 MCO48494 LBS63161	74987 44411	Listed Building citation: "Milestone. Probably early C19. Granite. Rectangular on plan. Round-headed monolith with incised inscription of 'FROM TRURO 5 MILES'. In upper case with serifs." Clearly visible in street close to wall, white painted with text preserved. Due to location in valley and developed area next to main road, turbine will not be visible.	19 th Century	L Grade II	4	High	No Change	Neutral
49	Three Burrows Milestone DCO5767 LBS66893	74226 46605	Listed Building citation: "Boundary stone. Early C19. Roughly-hewn granite monolith inscribed with the number 16. Also defined the mineral rights of the local landowners." Depending on density of vegetation, at least the top of the turbine is likely to be visible.	19 th Century	L Grade II	3	High	Negligible	Slight Negative
50	Milestone DCO5778 LBS63272	75299 46640	Listed Building citation: "Milestone. Circa early C19 or recut in circa early C19. Painted dressed granite monolith, rectangular-on-plan round-headed with shallow dressed panel facing road (north east) with incised inscription of FROM sans serifs. TRURO 5 MILES Original inscription was probably 5 in relief." Depending on density of surrounding vegetation, it is likely that the turbine will be visible.	19 th Century	L Grade II	A3	High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
51	Milestone DCO3835 LBS63284	76444 45013	Listed Building citation: "Milestone. Circa early C19 or recut in circa early C19. Painted dressed granite monolith, rectangular-on-plan round-headed with shallow dressed panel facing road (south) with incised inscription of FROM with crude serifs. TRURO 4 MILES Original inscription was probably 4 in relief." Depending on the density and height of surrounding vegetation it is likely that the turbine will be visible.	19 th Century	L Grade II	A3	High	Negligible	Slight Negative
52	Blackwater Milestone DCO15993 MCO55090 LBS1406160	7331 4582	Listed Building citation: "An early-C18 granite milestone standing on the north side of an unclassified road, c.64m to the north-east of Melroy Terrace, Blackwater. It is square-on-plan with a triangular head, both of which are painted white, and stands 0.68m high. On the north and west sides there are blank recessed faces which would have given the distances to Redruth and Lands End respectively." The turbine is likely to be visible from this location as there is very little vegetation lining the road.	19 th Century	L Grade II	A3	High	Negligible	Slight Negative
53	Scorrier Parish Boundary Stone DCO6829 MCO54480 LBS66893	72713 44052	Listed Building citation: "Boundary stone. Early C19. Roughly-hewn granite monolith inscribed with the number 16. Also defined the mineral rights of the local landowners. One of 4 similar stones included in this list, and also included in the list for the parishes of Chacewater, Gwennap, and Kenwyn, District of Carrick." Area significantly wooded with deciduous trees and close to busy road. Very unlikely that turbine will be visible.	19 th Century	L Grade II	A3	High	No Change	Neutral
54	Scorrier Parish Boundary Stone DCO4322 MCO54478 LBS63106	72883 44067	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough hewn and inscribed with the number 16. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." SMR inspection in 2005 records stone as having fallen over. Area significantly wooded with deciduous trees and close to busy road. Very unlikely that turbine will be visible.	19 th Century	L Grade II	A2	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
55	Parish Boundary Stone DCO7480 LBS66894	72877 43777	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn and inscribed with the number 16. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Area significantly wooded with deciduous trees and close to busy road. Very unlikely that turbine will be visible.	19 th Century	L Grade II	A3	High	No Change	Neutral
56	Parish Boundary Stone DCO7109 LBS63106	72883 43771	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn and inscribed with the number 16. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Located on private land. Located on a west-facing slope and screened by quite dense deciduous trees. Unlikely that turbine will be visible at all.	19 th Century	L Grade II	A3	High	No Change	Neutral
57	Parish Boundary Stone DCO4323 LBS63108	72981 43671	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn and inscribed with the number 27. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Within steep valley close to or within deciduous woodland. Unlikely that any of the turbine will be visible.	19 th Century	L Grade II	A3	High	No Change	Neutral
58	Parish Boundary Stone DCO3927 LBS63107	72883 43771	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough hewn stone with inscription hidden. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Located on private land. Within or surrounded by deciduous woodland, near top of slope. Unlikely that any of turbine will be visible though this is dependent on vegetation density.	19 th Century	L Grade II	A3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
59	Parish Boundary Stone DCO6319 LBS66895	72981 43671	Listed Building citation: "Boundary stone. Early C19. Roughly-hewn granite monolith inscribed with the number 29(?). Also defined the mineral rights of the local landowners." Located within a deciduous wooded area near the top of the hill. Unlikely that any of turbine will be visible though this may be dependent on vegetation density.	19 th Century	L Grade II	A3	High	No Change	Neutral
60	Parish Boundary Stone DCO5768 LBS63109	73072 43578	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn and inscribed with the number 3. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Within a steep valley surrounded by deciduous trees and close to a busy road. Very unlikely that any of the turbine will be visible.	19 th Century	L Grade II	A3	High	No Change	Neutral
61	Parish Boundary Stone DCO5549 LBS63113	73095 43563	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn and inscribed with the number 41. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Within a steep valley and surrounded by deciduous trees. Unlikely that any of turbine will be visible though this may be dependent on vegetation density.	19 th Century	L Grade II	A3	High	No Change	Neutral
62	Parish Boundary Stone DCO3929 LBS63112	73090 43559	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn and inscribed with the number 36. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Within a steep valley surrounded by deciduous trees and close to a busy road. Unlikely that any of the turbine will be visible.	19 th Century	L Grade II	A3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
63	Parish Boundary Stone DCO3928 LBS63111	73088 43564	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn and inscribed with the letters KI. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Within a steep valley surrounded by deciduous trees and close to a busy road. Unlikely that any of the turbine will be visible though the slope does face towards the turbine and visibility may be dependent on vegetation density.	19 th Century	L Grade II	A3	High	No Change	Neutral
64	Parish Boundary Stone DCO4324 LBS63110	73080 43569	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn and inscribed with the number 38. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Within a steep valley surrounded by deciduous trees and close to a busy road. Unlikely that any of the turbine will be visible though the slope does face towards the turbine and visibility may be dependent on vegetation density.	19 th Century	L Grade II	A3	High	No Change	Neutral
65	Parish Boundary Stone DCO5729 LBS63114	73157 43550	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn and inscribed with the number 47. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Within a steep valley and surrounded by deciduous trees. Unlikely that any of turbine will be visible though this may be dependent on vegetation density.	19 th Century	L Grade II	A3	High	No Change	Neutral
66	Parish Boundary Stone DCO5550 LBS3115	73810 43329	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough-hewn stone with inscription broken off. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Located in an area with very little substantial vegetation though in a shallow valley and on a slope facing away from the turbine. Depending on the density and height of vegetation it is possible that the turbine will be visible.	19 th Century	L Grade II	A3	High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
67	Parish Boundary Stone DCO3930 LBS63116	74049 43133	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough hewn and inscribed with the number 28. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Turbine is very unlikely to be visible though this may depend on the height and density of vegetation.	19 th Century	L Grade II	A3	High	No Change	Neutral
68	Parish Boundary Stone DCO4325 LBS63117	74251 43019	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough hewn and inscribed with the number 39. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Turbine is not likely to be visible from this location due to the topography though this may also depend on vegetation height and density.	19 th Century	L Grade II	A3	High	No Change	Neutral
69	Parish Boundary Stone DCO5730 LBS63118	74368 42965	Listed Building citation: "Boundary stone. Early C19. Granite, Monolith. Rough hewn and inscribed with the number 42. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Turbine is not likely to be visible from this location due to the topography though this may also depend on vegetation height and density.	19 th Century	L Grade II	3	High	No Change	Neutral
70	Parish Boundary Stone DCO3931 LBS63120	74498 42965	Listed Building: "Boundary stone. Early C19. Granite. Monolith. Rough hewn and inscribed with the number 45. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Turbine is not likely to be visible from this location due to the topography though this may also depend on vegetation height and density.	19 th Century	L Grade II	A3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
71	Parish Boundary Stone DCO4326 LBS63119	74444 42953	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith, Rough hewn and inscribed with the number 44. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Turbine is not likely to be visible from this location due to the topography though this may also depend on vegetation height and density.	19 th Century	L Grade II	3	High	No Change	Neutral
72	Parish Boundary Stone DCO5551 LBS63123	74765 42954	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough hewn and inscribed with the number 55. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Turbine is not likely to be visible from this location due to the topography though this may also depend on vegetation height and density.	19 th Century	L Grade II	A3	High	No Change	Neutral
73	Parish Boundary Stone DCO4327 LBS63121	74699 42963	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough hewn and inscribed with the number 5. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Turbine is not likely to be visible from this location due to the topography though this may also depend on vegetation height and density.	19 th Century	L Grade II	A3	High	No Change	Neutral
74	Parish Boundary Stone DCO3932 LBS63122	74723 42955	Listed Building citation: "Boundary stone. Early C19. Granite. Monolith. Rough hewn and inscribed with the number 54. This stone not only defined the parish boundary but the mineral rights of local landowners, and is one of a series of 35 similar stones included in this list." Turbine is not likely to be visible from this location due to the topography though this may also depend on vegetation height and density.	19 th Century	L Grade II	A3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
75	Post Office DCO3907 LBS63157	75046 44405	Listed Building citation: "2 adjoining shops with houses. Early C19. Rendered and painted studwork to front. Corrugated asbestos roof with brick chimneys left and right over party walls. Originally 1-room and double depth plans. Post Office, left is now 1-room with C20 wing to rear. 2 storeys. 3-window north street front. 16-pane horned sash, left, 12-pane horned sash over right side door of Post Office and original hornless 16-pane sash centrally over right shop window. Ground floor left has fine early C19 double-fronted shop with bowed 20-pane shop window either side of shop entrance with glazed and panelled door and overlight. The right-hand bowed window is slightly altered. House doorway to right and bowed shop windows are flanked by narrow pilasters and the whole has entablature with fascia bowed out over the windows and moulded cornice over. Right-hand shop of late date has 6-panel top-glazed door in original opening, left and shopfront of shallow projecting bay with C20 glazing and original simple fascia. Interior of Post Office much altered. The shop to No7 is one of the fine shopfronts for which Chacewater is notable." Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	3	High	No Change	Neutral
76	Prator DCO4339 LBS63160	74982 44419	Listed Building citation: "2 adjoining houses. Early C19. Elvan and killas to ground floor, front, and render to 1st floor. Asbestos slate roof, left and corrugated asbestos roof, right. Brick chimneys over gable ends and over party wall. 1-room house, left, and 2-room house, right, both with 2 storeys. Left house (No 20) has 2-window south front with original hornless 16-pane sashes. Doorway with top-glazed panel door to right. Cemented wooden lintels over ground floor openings. No 21 has symmetrical 3-window south front with 4-panel door and gable roof porch with latticed panels flanking shouldered doorway. Painted cambered arches over ground floor windows. Cast iron rainwater head and downpipe."	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			Located next to a busy road within a valley and developed area. Turbine will not be visible.						
77	Primrose Farmhouse DCO3901 LBS63141	74814 46230	Listed Building citation: "Farmhouse. Circa early C19. Built by Henry James for himself. Painted killas and cob, slate-hung to first floor of front. Wheat reed thatched roof with brick chimneys over gable ends. Scantle slate roof over lower part to right. Originally 2-room cross-passage central-stair plan; 1 room 2-storey extension to right, circa mid C19, and single storey lean-to to rear. 2 storeys. 3- and 1-window front. Main part has central doorway with panelled door and low pitched gabled porch. 9-pane sashes with high meeting rails. Old wooden laundry under eaves. Later C19 part, right, has 4- pane sashes. Interior is little altered with open beams and pine muntin and plank partitions." Not directly accessible, private land. At least the top of the turbine is likely to be visible depending on the vegetation height and density.	19 th Century	L Grade II	A3	High	Minor	Slight Negative
78	Road Bridge Over Stream DCO5542 LBS63153	75135 44443	Listed Building citation: "Road bridge arch and parapet. Early C19. Killas rubble with dressed elvan voussoirs and granite copings. Single span. South side has nearly round arch over stream. Plain parapet with rounded copings." Located within a valley and developed area as part of a busy road. Turbine will not be visible.	19 th Century	L Grade II	3	High	No Change	Neutral
79	Roger's Salon DCO5758 LBS63159	74985 44391	Listed Building citation: "House with shop. Mid C19. Incised stucco front with painted rubble sides and rear. Hipped asbestos slate roof with slightly projecting eaves and brick chimneys over side walls. 2-room double depth plan. 2 storeys. 3-window north front with original 12-pane hornless sashes with old glass in original opening with moulded wooden architraves. C19 15-pane shop window, left, probably originally wider to right. Paired entrances to right. Left shop entrance remodelled and blocked but right entrance to house survives with 4-panel door and overlight with marginal panes. Flanking wooden pilasters. Original continuous fascia with consoles and	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			moulded cornice over shopfront and doorway to house. Sashes also to side and rear.” Modern rendering to historic shop front, granite threshold, rubble stone wall, modern/late inserted door, otherwise important elements in quite good repair. Located next to a busy road within a valley and developed area. Turbine will not be visible.						
80	Simla and Trecoose DCO5497 LBS63760	73705 46197	Listed Building citation: “Pair of houses. Circa late C19. Roughly coursed killas rubble with granite dressings. Dry Delabole slate hipped roofs with hidden valley. Brick axial and gable stack with stepped cornices. Cast-iron ogee section gutters with lions’ heads at the junctions. Plan: Overall rectangular double depth plan. Similar but not identical pair of houses. Integral parallel service-range at rear of left-hand house; service wing at right angles behind right-hand side of other house. Each house has 2 rooms at the front flanking an entrance hall leading from a 2-storey porch. Stair halls at rear of left-hand house and behind right-hand room of other house. Exterior: 2 storeys. Unaltered elevations. Pair of identical-fronted houses. Each house has a symmetrical 1:1: bay front with central 2 storey projecting porch with the upper part of the bay surmounted by a moulded triangular gable pediment. Plinth, first-floor sill string. Original doors and windows: 4-panel doors with overlights; 4-pane horned sashes. First floor openings have shallow arches and hoodmoulds. Round-arched stair windows with traceried heads and marginal panes.” Not directly accessible, private property. Majority of turbine will be visible though there is a screen of trees around these properties.	19 th Century	L Grade II	A3	High	Minor	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
81	Stables at Higher Whitehall DCO3925 LBS63101	72894 44350	Listed Building citation: "Stables and coach house. Early C19. Rubble to ground floor, stuccoed to first floor. Hipped scantle slate and corrugated iron roof. Rectangular plan of coach house left (south) and larger part for stables, right. 2 storeys. East front: symmetrical to right with 2 blind pointed-arched first floor windows and central ground floor doorway with boarded door flanked by windows with bars. To left, wide carriage entrance. At right-hand (north) end, central doorway to left with external granite steps with painted rubble retaining wall." Not directly accessible, private land. Located on western side of the hill. Turbine is not likely to be visible.	19 th Century	L Grade II	A3	High	No Change	Neutral
82	Sunbeams DCO5608 LBS63761	73050 45719	Listed Building citation: "House in row. Circa early-mid C19. Stuccoed or rendered front. Asbestos slate roof with brick chimneys over right-hand party wall. Plan: Double-depth plan with probably 2 rooms at the front flanking a central entrance hall leading to stair hall between rear service rooms. Exterior: 2 storeys. Symmetrical 2-window front with central doorway. Mid-floor string and projecting keystones over the ground floor window openings. Possibly original panelled door with 2 tall round-headed panels, overlight. Probably C19 4-pane hornless sashes (possibly original sashes with some of the glazing bars removed) to first floor, later 4-pane horned sashes below. Interior not inspected. Passmore Edwards was born in Blackwater village. The house where he was born does not survive, but this is the house where the great benefactor lived for much of his childhood." Not accessible, private land. Close to two major roads and railway lines, and whilst at least the top of the turbine will be visible it is unlikely to be audible.	19 th Century	L Grade II	A3	High	Minor	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
83	Britannia Hotel DCO4340 LBS63164	75015 44420	Listed Building citation: "Public house. Early/mid C19. Stucco over studwork to front. Scantle slate roof with wide eaves to front. Brick chimney over party wall left, axial chimney and gable end right with evidence for earlier building adjoining on Literary Institute site. 2-room double depth plan with covered carriageway to right. 2 storeys. South street front of symmetrical 3-window part with central doorway and window over carriageway to right. All windows are 6-pane horned sashes with moulded wooden architraves. Stucco plinth and rusticated quoins. Flush beaded 6-panel door with overlight. Interior opened up as 1-room C20 and with simple moulded beams to left-hand part. First floor not inspected. Original granite flag pavement to front with granite kerb." Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	3	High	No Change	Neutral
84	The Rambling Miner DCO5541 LBS63173	74918 44392	Listed Building citation: "Public house. Circa early C19. Killas rubble with cambered dressed elvan arches with projecting keystones over first floor openings. Asbestos slate roof with brick chimneys over gable ends, shared with No.II, left. 2-room central-stair plan with service rooms to rear. 2 storeys. Nearly symmetrical 3-window south- street front. Doorway off-centre to right with C20 door. Simple Doric porch with plain wooden columns and simple entablature. Flanking windows are tripartite bowed sashes recessed within cement surrounds. Originally with timber lintels like that surviving over doorway. First floor has horned 4-pane sashes in original openings." Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
85	Tregullow Cottage DCO6309 LBS66938	73006 43560	Listed Building citation: "Probably C18; altered. Uncoursed rubble, part rendered and all painted white, graduated slate roof. L-plan formed by 2-unit main range with rear extension. Two storeys and 2 wide bays; central doorway now covered by large rectangular glazed porch; two small 4-pane sashed windows on each floor, those at 1st floor offset to the left (and all now flanked by modern pseudo-shutters). Steeply-pitched roof with gable chimneys, that at the right-hand end extruded and with a wider base suggesting an internal bread oven (small privy attached to wall in front of chimney)." Not accessible, private property Located close to or within deciduous woodland. It is possible that at least the top of the turbine will be visible though this is dependent on the height and density of vegetation.	18 th Century	L Grade II	A2	High	Negligible	Slight Negative
86	Veryan DCO4338 LBS63158	75035 44404	Listed Building citation: "Terrace of 2 small shop premises with accommodation above and small house. Mid C19. Stucco front. Asbestos slate roof with brick chimneys, left and right over party walls. Shallow 1-room double depth plans. 2 storeys. Regular 5-window range, slightly wider spaced to right. All first floor windows and ground floor right (No.11) are C19 4-pane hornless sashes. All ground floor openings have moulded cornice hoods on console brackets. To left of ground floor (No.9) a mid-C19 shop front with 3 elliptically arched lights, double doors to right and with fascia above. At centre (No.10) a narrow 2-light shop window with elliptically arched lights and bowed fascia. To right of centre a pair of doors (Nos.10 and 11) under one hood, the left-hand door has 2 round-headed panels, the right-hand C20 glazed door, both with overlights." Located next to a busy road within a valley and developed area. Turbine will not be visible.	19 th Century	L Grade II	3	High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
87	Blackwater War Memorial DCO14516 LBS503073	7360 4604	Listed Building citation: "War memorial in front of Blackwater, Passmore Edwards Hall, unveiled in 1921. The cross is of dressed granite in the Celtic style with a pierced wheel-head cross on a tapered shaft with celtic knotwork decorative panels. The cross shaft stands upon a tapering base bearing the names of the First World War dead and returnees. The inscription on the south west face reads: 'THOSE WHO MADE THE SUPREME SACRIFICE 1914-1919' and a list of nine names. North west face: 'TO THE GLORY OF GOD AND IN HONOUR OF THE BLACKWATER AND DISTRICT MEN WHO SERVED THEIR KING AND COUNTRY 1914-1919' and the first part of the list of names which continues on the remaining faces. The base stands upon a two stepped plinth, the upper south west facing side bearing the inscription: 'ALSO IN LOVING MEMORY OF THOSE WHO GAVE THEIR LIVES IN THE 1939-1945 WAR' and the names of eight men who were killed in action. The lower plinth is in turn surrounded by eight low granite posts supporting a chain...This striking granite memorial with its Celtic-style wheel cross stands in a commanding position, adjacent to a Grade II Listed Building. Given its strong historic interest and elegant architectural handling, it fully merits listing." A large proportion of the turbine will be clearly visible with only minimal vegetation screening the memorial.	20 th Century	L Grade II	4	High	Minor	Slight Negative
88	Blackwater NC Wesley Chapel DCO4190 MCO32319 LBS63759	73665 46190	Listed Building citation: "Wesleyan chapel and adjoining schoolroom. Date plaque 1823, remodelled slightly circa late C19. Painted rubble walls with brick arches over the openings. Scantle slate hipped roof. Cast-iron ogee-section gutters. Plan: Rectangular aisle-less plan with gallery on 3 sides. Rostrum at north-west (ritual east) end, schoolroom beyond. Exterior: 2 storeys elevations. Original openings. Symmetrical 2 windows south-east front has wide central doorway spanned by a segmental arch, otherwise round-headed openings with circa late	19 th Century	L Grade II	3	High	Minor	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			C19 horned sashes with glazing bars. Interior: Early C19 gallery (not inspected) said to be from a chapel in Truro (Christopher Stell); bow fronted rostrum.” Now a private dwelling. Some of the turbine may be visible from the upper floors depending upon the vegetation density.						
89	Whitehall DCO3902 LBS63143	72848 44305	Listed Building citation: “C18 or earlier remodelled and extended early C19. Painted stucco to front otherwise painted rubble or cob with brick garden walls flanking south front. Irregular grouping of dry Delabole slate roofs to front part with large rendered brick stacks over gable ends both of main range and to west gable end wing to south west with hip on south corner. Hipped scantle slate roof to C18 rear wing (north east) with corrugated asbestos to hip and to further wing adjoining to north west with hip to east and brick chimney over gable end to west. Highly irregular plan of 2-room C18 core with 1-room wing at angle to south west, large C18 kitchen wing to rear, right with further 2-room range adjoining north west corner of kitchen to west and early C19 infill for central stair. 2 storeys. 3-window south front with 1-window wing at angle to left. Ground floor has doorway off-centre to right with panelled door set back behind flat roofed early C19 projection with identical flanking canted bays each with 3 marginal glazed 16-pane sashes with fluted pilasters to sash boxes. Similar glazing pattern to other windows, all sashes except side opening casement over and to left of doorway, and French window to wing. Flanking embattled brick garden walls each have a central pointed arched niche. 1-window east wall of kitchen wing has wide openings with paired hornless 12-pane sashes. Cast iron ogee gutters throughout. Interior has much detail of the early C19 period including open well stair with wreathed mahogany handrail over newel, guilloche moulded plaster ceiling band to vestibule, ceiling bands in reception rooms and panelled doors.	18 th Century	WHS L Grade II	3	Very High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			First floor and roof structures not inspected. This house is said to have been the house of the Hornblowers.” Not directly accessible, private land. Screened by mature trees at front, it is possible that the top of turbine may be visible from certain aspects.						
90	Zimapan House DCO3885 LBS63204	73050 43577	Listed Building citation: “Villa, formerly mine office now private house. Circa early mid C19. Stucco. Hipped dry Delabole slate roofs with wide eaves to front (south) and lean-to at end of rear wing (north). Brick chimneys over rear wall and east side wall of wing. T-shaped overall plan of single-storey single depth part to front (south) of large room left (west, wide entrance hall and 3 smaller rooms to right plus 2 storey service wing under some eaves level to rear (north) of entrance hall. Regular 5-window east of south front with original 12-pane hornless sashes. Wide flat-roofed entrance porch between window 2 and 3 from left with original 6-panel door with overlight flanked by tall narrow sidelights between pilaster like posts and further windows with glazing bars to porch sides, all surmounted by fascia with moulded cornice. Interior is little altered with original doors and architraves and with plaster ceilings with moulded cornices to the front rooms. Main room has trailing vine band and the 3 rooms have egg and dart detail. Some fireplace surrounds with consoles.” Located close to busy road and in slight hollow within steep valley. Surrounded by dense deciduous trees. The turbine should not be visible.	19 th Century	WHS L Grade II	3	Very High	No Change	Neutral
91	Wheal Busy Undated Mound MCO34759	7445 4500	SMR entry: “An oblong mound, apparently built up against the north side of a field hedge, and measuring 20m x 15m, is visible on air photographs (p1) and was plotted as part of the NMP. The precise date and function of the feature is not certain, but it is probably the waste mound from a mine shaft. It could be related to Wheal Seymour (41098) to the north, or Wheal Daniel (40971) to the south east.”	Post Medieval	WHS	2	Very High	Minor	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			Not discernible within field or hedgerow. The 'Old Shaft' to which it relates is shown on the OS first and second edition (c1880 and 1907) maps. The mound appears to be the remains of an abandonment hedge built around the shaft and accompanying spoil. The turbine will be visible and audible as this abuts the hedge-line of the turbine field.						
92	Blackwater Railway Viaduct MCO55404 (Plate 8; Plate 9)	7441 4523	SMR entry: "Blackwater Viaduct on the GWR main line at 305m 68c. The WCR structure of 1852 was a timber viaduct of Margary class "Y", which was replaced by the present masonry viaduct of seven segmental arches in 1888. One masonry pier of the original viaduct survives." Granite viaduct still in use with modern alterations. Evidence of previous viaduct discernible in vegetation below. Majority of turbine will be visible. The viaduct is an important landscape feature dominating the valley it traverses.	19 th Century	B	4	Medium	Minor	Slight Negative
93	Jolly's Bottom Undated Mound MCO34762	7481 4540	SMR entry: "Two small mounds, the largest measuring 10m x 8m, are visible on air photographs (p1) and were plotted as part of the NMP. The mounds have the appearance of dumps of mine waste and more spoil seems to have been dumped against the field hedge immediately to the east. It is uncertain with what workings the mounds are associated; possibly Wheal Seymour (41098) to the south west." Not accessible, private land. Very likely that at least the top of the turbine will be visible though this is dependent on the height and density of the vegetation.	Post Medieval	WHS	A3	Low	Negligible	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
94	Chacewater Railway Viaduct MCO55405	7483 4535	SMR entry: "Chacewater Viaduct on the GWR main line at 305m 46c. The WCR structure of 1852 was a timber viaduct of Margary class 'Y', which was replaced by the present masonry viaduct of five segmental arches in 1888." Granite viaduct still in use with modern alterations. The viaduct is an important landscape feature within the valley. The majority of the turbine will be visible from track level and at least the top of it from the base of the viaduct.	19 th Century	B	4	Medium	Minor	Slight Negative
95	Wheal Howl Mine MCO12992	752 452	SMR entry: "Wheal Howl was an ancient mine revived by a return migrant from Brazil in 1858. The old men's workings were not evident as the ground had been landscaped, but the shafts were soon uncovered and large quantities of copper ore was found, discarded by former miners who were after tin. The mine was renamed in the same year, becoming East Wheal Busy. In 1860 it became North Clifford and Busy United. The company was still in existence in 1862 but the mine was probably a casualty of the copper mining crash of the mid 1860s (b1)." Not accessible, private land. At least the top of the turbine will be visible depending on the height and density of vegetation.	19 th Century	WHS	A3	Very High	Negligible	Slight Negative
96	Wheal Daniell Mine MCO12893	749 448	SMR entry: "Wheal Daniell is listed by Heard in 1817 (b1). It had been worked to the 48 fathoms level below adit (13) in 1818 and had a 27" engine (b2). It later became a part of Wheal Busy (19318). The mine reopened in the early 1870s and produced some tin stuff. In 1872 it produced 15 tons of ochre. It closed in 1873 (b4, 6). A row of four shafts and a large pit are visible at this location on air photographs (p1) and were plotted as part of the NMP." Located on top of a hill so the majority of the turbine is likely to be visible though obscured by vegetation.	19 th Century	WHS	A3	Very High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
97	Chacewater Malt House MCO29063	7515 4460	SMR entry: "A malthouse at Chacewater occupied by s. Moyle is recorded on the Tithe Map of 1845 (b1). Kelly's directory lists a brewery at this location in 1873 (b5) and it is mentioned in 1847 (b2), 1852 (b3) and 1856 (b4)." Not directly accessible. Location surrounded by mature trees and in the bottom of a valley. Turbine will not be visible.	19 th Century	C	2	Low	No Change	Neutral
98	Chacewater Brewery MCO29040	7510 4453	SMR entry: "A brewery in Chacewater is shown at this location on the OS map 1879 (b1). A building is shown at this position on the OS map of 1963 (b2)." Located in a steep valley bottom with dense deciduous woodland. Turbine will not be visible.	19 th Century	C	A2	Low	No Change	Neutral
100	Chacewater Military Camp MCO34975	7528 4434	SMR entry: "Four large nissen huts or tents are visible on vertical aerial photographs taken in 1944 by the USAF (p1), lying in two fields adjacent to the lane out of Chacewater known as Kerley Hill. The date of these photographs indicates that these features are likely to be associated with the temporary D Day camps around Chacewater, described in prn's 56042, 55049." No longer discernible. Turbine is very unlikely to be visible though this may depend on vegetation growth.	20 th Century	C	1	Low	No Change	Neutral
101	Lobbs Stamps Stamping Mill MCO29064	7511 4432	SMR entry: "Lobb's stamps at Chacewater is recorded at this location on the Tithe Map of 1845 (b1)." It is very unlikely that the turbine will be visible as this site is close to the base of the valley within a developed area.	Post Medieval	WHS	A1	Very High	No Change	Neutral
102	Chacewater Stamping Mill MCO29084	7484 4443	SMR entry: "The fieldnames "middle and lower stamps" at chacewater, occupied by W. Francis, are shown at this location on the tithe map of 1845 (b1)." Located in a valley and developed area. Turbine will not be visible.	Post Medieval	WHS	1	Very High	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
103	Chacewater Blacksmiths Workshop MCO9014	7499 4445	SMR entry: "A smithy occupied by J. Tyacke is shown at this location on the tithe map of 1845 (b1)." Located close to a busy road in within a developed valley. Turbine will not be visible.	Post Medieval	C	A2	Very High	No Change	Neutral
104	Pitsleweren Stamps MCO29085	7477 4445	SMR entry: "Pitsleweren stamps at Chacewater is shown at this location on the tithe map of 1845 (b1)." Located in a deciduous wooded valley close to a busy road and developed area. Turbine will not be visible.	Post Medieval	WHS	A1	Very High	No Change	Neutral
105	Chacewater Mound MCO35744	74630 44270	SMR entry: "An oblong mound, 35m x 25m, is visible on air photographs (1) and was plotted as part of the NMP. Although its precise date and function are uncertain from the photo evidence, it is likely that this feature is the spoil tip associated with a small quarry or a mine shaft." Located on high ground with only minimal screening by mature trees. It is likely that the turbine will be visible.	Post Medieval	WHS	3	Medium	Negligible	Neutral
106	Keneva Shaft MCO35745	7455 4406	SMR entry: "A line of extraction pits and associated spoil tips is visible on air photographs (p1) and was plotted as part of the NMP. These features are the remains of quarrying, and a quarry is marked at this location on the 6" OS map of 1963." Not accessible, private land. It is likely that the top of the turbine will be visible, depending on height of vegetation.	Post Medieval	WHS	A1	Very High	Negligible	Neutral
107	Chacewater Pound MCO25186	74460 44260	SMR entry: "There is an extant manor pound to the west of Chacewater. It is described as extant from OS 6" maps (1) by Warner (2). Marked as 'Manor Pound' on 1st and 2nd Edition OS 1:2500 historic mapping (1,2). The name changes to 'Pound House' on OS 1:10,000 mapping from the 1970s (4) and is 'Pound Cottage' on the latest OS mapping (5)." Only the cottage is visible. It has a screen of mature trees and is close to two busy roads. Turbine may be visible depending upon the density of vegetation.	Medieval/ Post Medieval	C	2/3	Low	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
108	Salem NC Chapel MCO32156 LB Revoked DCO3873	73981 44194	SMR entry: "Baptist chapel now farmbuilding. Circa 1830. Killas rubble with elvan quoins, jambstones and voussoirs. Hipped corrugated iron roof originally scantle slate. Rectangular plan with wide entrance to east. Later entrance and porch to middle of north wall. Wide doorway to east side with flat arch fallen. 2-window openings to north, south and west sides each with flat arches. North side has gable ended brick porch and blocked. Later entrance to far right. Interior gutted but retains king post roof structure. This is the first Baptist chapel to be built in Cornwall." Not accessible, private land. Located near the base of the valley with mature trees providing a screen. Turbine is likely to be visible though this is dependent on the density of vegetation.	19 th Century	B	2	Medium	Negligible	Slight Negative
109	Salem Military Camp MCO35741	7385 4437	SMR entry: "A temporary camp dating from World War II, consisting of numerous bell tents in fields lining the A390 road to the west of Chacewater, is visible on air photographs (p1) and was plotted as part of the NMP. The camp is one of several in the vicinity (the others being 53831 and 53833&4) providing accommodation for American troops during the build-up to the D.Day invasion of 1944." Mature trees will obscure the view of the turbine though from certain aspects it may be visible depending on vegetation density.	20 th Century	C	1	Low	No Change	Neutral
110	Chacewater Mine MCO39057	73802 44558	SMR entry: "Otherwise known as Wheal Busy, or Great busy [19318], for which see detailed history." (Site 1) Area now overgrown with low scrub vegetation. Turbine will be visible.	Post Medieval	WHS	3	Very High	Minor	Moderate Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
111	Wheal Busy WW2 Slit Trench MCO35743	741 447	SMR entry: "A cluster of slit trenches and fox holes distributed throughout the eastern end of the Wheal Busy mining complex are visible on air photographs (p1) and were plotted as part of the NMP. These features are likely to be associated with the temporary camp to the immediate west (53833) and probably are the result of military exercises or training of American troops during the build-up to the D-Day invasion of 1944." Overgrown with grasses and heather. Turbine will be visible.	20 th Century	C	1	Low	Minor	Slight Negative
112	Boscawen Farm Barrow MCO34765	7356 4516	SMR entry: "A subcircular single-ditched enclosure, 10m in diameter, is visible as a crop mark on air photographs (p1) and was plotted as part of the NMP. This feature is likely to be the plough-levelled remains of a round barrow, especially given its hill top location." No upstanding remains. Located on crest of hill with good intervisibility with surrounding landscape over valleys. Turbine will be visible.	Bronze Age	B	1	Medium	No Change	Neutral
113	Boscawen Farm Undated Mound MCO34767	736 452	SMR entry: "A subcircular mound, 20m in diameter, is visible on air photographs (p1) and was plotted as part of the NMP. This feature may be the spoil tip of a mine shaft, perhaps associated with Boscawen mine (41085), but it is possibly a barrow, given its hill top location and the proximity of barrow 53707." Oval shape mound survives to approximately 1-1.5m high. Overgrown with grass and gorse. Erosion to SE/SW sides showing very slaty soil and larger blocks of slate. Located on crest of hill with good intervisibility with surrounding landscape over valleys. This mound is shown on the 1 st and 2 nd edition OS maps.	Unknown	WHS	3	Very High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
114	Leigham Farm Shaft MCO34763	7390 4512	SMR entry: "Three spoil tips, one with an associated shaft, are visible on air photographs (p1&2) and were plotted as part of the NMP. It is not certain to which workings they are related, but it could be Boscawen mine (41085) to the north, or the Wheal Busy complex (19318) to the south." It is likely that the top of the turbine will be visible but farm/shaft is in base of valley with dense vegetation in the intervening space.	Post Medieval	WHS	A2	Very High	Negligible	Slight Negative
115	Wheal Ann Mine MCO39248	73981 45155	SMR entry: "This small early nineteenth century copper mine was one a part of the Wheal Busy Sett. The workings were from Wheal Seymour Shaft (b1). See Wheal Seymour (41098) for more detailed history." No physical remains except for a bowl shaped dip in field which may relate to the shaft. Turbine very likely to be visible though this is dependent on vegetation density. It may be audible depending on weather conditions.	19 th Century	WHS	1	Very High	No Change	Neutral
116	Leigham Farm Railway Bridge MCO55401	7387 4541	SMR entry: "A bridge carrying the line of the West Cornwall Railway over a lane at 306m 20c (not inspected)." The turbine is unlikely to be visible or audible from the base of the bridge. At least the top of the turbine may be visible from the level of the railway line, which is still in use.	19 th Century	B	A3	Medium	Minor	Slight Negative
117	Trevint Railway Bridge MCO55403	7399 4532	SMR entry: "A bridge carrying the public road over the line of the West Cornwall Railway (not inspected)." Wooden sided slightly humped back bridge. Likely to have a clear view of turbine depending on vegetation density. The railway below is still in use.	Post Medieval	C	3	Low	Negligible	Slight Negative
118	Chacewater Railway Station MCO48581	74186 45235	SMR entry: "Chacewater Station opened on 1st November 1853 as part of the West Cornwall Railway. The original station had a single platform on the down side of the standard gauge line, and a passing loop and second platform were added in 1872. In 1912 the layout	19 th Century	C	2	Low	Minor	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			<p>was extensively remodelled to accommodate the Newquay Branch trains, with the up side platform being converted to an island with a new stone building. A GWR signal box of 1888 was replaced in 1914, and continued in use until 1977. The original WCR wooden building on the down side was destroyed by fire in 1947, and a replacement was provided in 1955. The goods yard was on the down side. The station closed to passengers and freight in 1964, but cement traffic using the old goods yard as a distribution depot continued until 1987.”</p> <p>The station area includes a 20th Century brick and granite building used by a storage company. Platform still upstanding though invaded by weeds and vegetation which may be damaging the fabric/structure. Railway still in use.</p> <p>Top of turbine may be visible depending on vegetation.</p>						
119	Chacewater Stamping Mill MCO29092	7437 4532	<p>SMR entry: “A stamping mill to the NE of Chacewater station is shown at this location on the tithe map of 1842 (b1).”</p> <p>No physical remains identified in this densely wooded part of the valley.</p> <p>Depending on the vegetation density, the turbine may be visible beyond the viaduct.</p>	Post Medieval	WHS	1	Very High	Negligible	Slight Negative
120	Carnhot Mine MCO11936	741 456	<p>SMR entry: “Carnhot Mine was in operation in 1800 (b4), by 1811 had acquired a steam engine and was raising some good tin but poor copper. It is listed by Heard in 1817 (b1) and located on Thomas's map of 1819 (b2). A trespass by the neighbouring and more powerful Chacewater Mine over access to the water flowing from the Carnhot adit for their steam engine which was dammed for the purpose eventually wrecked the mine which flooded. It closed in 1812; equipment included a 24" steam engine and 2 horse whims (b5). It was quite extensively worked in 1835-40 under the name Killiwerris Mine. A ruined building and a shaft probably associated with this mine are visible on air photographs (p1) and</p>	19 th Century	WHS	A2	Very High	Negligible	Slight Negative

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			were plotted as part of the NMP.” Depending on vegetation density the turbine is likely to be visible.						
121	Carnhot Farmstead MCO25179	7434 4560	SMR entry: “This is the remains of a post medieval winnowing floor. The only source is Warner, who gives no details, or reasons for this interpretation (b1).” Not accessible, private land. Depending on vegetation density the turbine may be visible.	Post Medieval	C	Unknown	Low	Negligible	Slight Negative
122	Cornwall Mining World Heritage Site	75000 43500	Gwennap, Kennall Vale and Perran Foundry Area website description: “Once the richest of all Cornwall’s mining districts, its fine houses, well-preserved industrial remains and dramatic, alien-looking mining landscapes combine to tell a compelling and colourful story of Cornish Mining’s heyday.” Whilst the proposed development is entirely within the World Heritage Site, none of it physically impacts any identified feature within it. The proposal’s potential impact on individual elements of the WHS have been considered in more detail in additional entries in this gazetteer.	Post Medieval	WHS	4	Very High	Minor	Moderate Negative
123	Field Boundary (Plate 5)	74464 44907 (centre)	Generally a stone-faced earth bank up to 1.5m in height. Faced with varying size slate and quartz, possibly mining waste material. Vegetated with grasses, gorse, holly and oak bushes, occasional young sycamore trees and haw/blackthorn all up to 2m high. There was evidence in many areas of erosion of the stone facing and rabbit burrowing. The northern boundary first shown on the c1880 OS map was often just an earth bank with vegetation as before and a barbed wire fence. The remaining boundary was built between c 1880 and c1907 (OS maps). The turbine will be completely visible and audible.	Post Medieval	C	3	Low	Minor	Slight Negative
124	Eastern Gateway through North Boundary	74508 44979	Gateway through hedge, possibly not original as ends of stone-faced earth bank not finished. Also show signs of erosion as stonework has fallen away and modern debris is embedded in exposed earth. Gateposts include one wedge split granite post, possible reused from elsewhere,	Post Medieval/ Modern	D	2	Low	No Change	Neutral

Site No.	Name	NGR (SW)	Description including Location and Intervisibility details	Probable date	Significance	Condition	Sensitivity	Magnitude of Impact	Overall Impact
			the other is concrete. The turbine will be completely visible and audible.						
125	Western Gateway though North Boundary	74484 44987	Wedge split granite gate posts, possibly reused from elsewhere and with possibly later inserted iron fixings on top and modern Portland cement. Ends of stone-faced earth bank too overgrown to comment on condition. The turbine will be completely visible and audible.	Post Medieval/ Modern	C/D	2	Low	Minor	Slight Negative
126	Trackways		The 1880 OS map shows two trackways traversing the field with two more in the approximate location of the current paths around the south and west boundaries. There was no discernible above ground evidence of the trackways that apparently traversed the field. The proposed cable route may cut through the line of one of the tracks. The turbine will be completely visible.	Post Medieval	C	1	Low	Negligible	Slight Negative

7 Statements of Significance

Many of the sites have already had their significance assessed by Scheduling or Listing. Where sites are Scheduled or Listed they have not been considered under the Sites and Monuments Records category below, even though they feature on that list, to avoid duplication. Likely subsurface and associated remains are likely to be of equal significance to the sites identified below.

7.1 World Heritage Sites (Sites 1-4, 6-10, 38, 39, 44, 89-91, 95, 96, 101, 102, 104-106, 110, 113-115, 119, 120, 122)

These sites are designated and defined by UNESCO (UNESCO website):

The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. This is embodied in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972.

Sites inscribed on the World Heritage List benefit from the elaboration and implementation of a comprehensive management plan that sets out adequate preservation measures and monitoring mechanisms. In support of these, experts offer technical training to the local site management team.

The inscription of a site on the World Heritage List brings an increase in public awareness of the site and of its outstanding values, thus also increasing the tourist activities at the site. When these are well planned for and organized respecting sustainable tourism principles, they can bring important funds to the site and to the local economy.

7.2 Scheduled Monuments (Site 1)

Scheduled Monuments have Statutory Protection under the Ancient Monuments and Archaeological Areas Act 1979. These are sites that have been identified by English Heritage, the Government's archaeological advisory body, as being of national importance, and are included in the County Lists maintained by the Secretary of State for Culture, Media and Sport. A schedule has been kept since 1882 of monuments whose preservation is given priority over other land uses. The current legislation, the Ancient Monuments and Archaeological Areas Act 1979, supports a formal system of Scheduled Monument Consent for any work to a designated monument.

7.3 Listed Buildings (Sites 5, 11-37, 40-43, 45-88)

Sites are Listed to mark their special architectural and historical interest; they are protected by law and Listed Building Consent must be granted for any alterations to the building (English Heritage Website).

7.4 Sites and Monuments Records

7.4.1 Regional Significance (Sites 92, 94, 108, 112, 116)

These remains are considered of regional significance because of their rarity, setting and upstanding evidence.

7.4.2 Local Significance (Sites 97, 98, 100, 103, 107, 109, 111, 117, 118, 121, 123, 126)

The remains or sites of formerly visible remains are considered of local significance. The extant boundaries (Sites 123) may be considered "important" hedgerows under the Section 97 (hedgerows) of the Environment Act 1995 as they have existed for more than 30 years and incorporate or lie beside archaeological features recorded in the Sites and Monuments Record.

Within the current legislation (Hedgerow Regulations 1997) the following extract explains the criteria used to assess the archaeological and historical importance of hedgerows:

For the purposes of Section 97 (hedgerows) of the Environment Act 1995 and these Regulations, a hedgerow is "important" if it, or the hedgerow of which it is a stretch:

- (a) has existed for 30 years or more; and
- (b) satisfies at least one of the criteria listed in Part II of Schedule 1.

Part II of Schedule 1 provides the following 'historic' criteria:

1. The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose "historic" means existing before 1850.
2. The hedgerow incorporates an archaeological feature which is included in the schedule of monuments compiled by the Secretary of State under section 1 (schedule of monuments) of the Ancient Monuments and Archaeological Areas Act 1979; or recorded at the relevant date in a Sites and Monuments Record.
3. The hedgerow is situated wholly or partly within an archaeological site included or recorded as mentioned in paragraph 2 or on land adjacent to and associated with such a site; and is associated with any monument or feature on that site.
4. The hedgerow marks the boundary of a pre-1600 AD estate or manor recorded at the relevant date in a Sites and Monuments Record or in a document held at that date at a Record Office; or is visibly related to any building or other feature of such an estate or manor.
5. The hedgerow is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Enclosure Acts; or is part of, or visibly related to, any building or other feature associated with such a system, and that system is substantially complete; or is of a pattern which is recorded in a document prepared before the relevant date by a local

planning authority, within the meaning of the 1990 Act, for the purposes of development control within the authority's area, as a key landscape characteristic.

Boundary features are the most abundant archaeological feature to be found in Cornwall. Whilst some may be of recent origin, many have older origins and are thus of considerable importance in telling the story of the development of agriculture in the rural landscape, their layout, inter-relationships and phasing allowing sequences of land clearance and enclosure for agriculture to be read. They are important visually (as landscape features) and archaeologically.

Only documentary records now exist for the majority of the other sites and whilst it is important to record their former existence, no further evidence can be gained or affected from the surface.

7.5 Additional Sites (Sites 124 and 125)

The gateways (Sites 124 and 125) are not shown on historic mapping and are likely to be quite modern. They are not considered of archaeological significance.

8 Impacts

The impacts of the turbine are broken down into three phases; construction, operational and end of use. A visual impact and limited auditory impact throughout the operational phase is present in some degree for all the sites, whilst construction and end of use impacts only concern the immediate vicinity of the turbine, its access and cable run. Notably ten existing wind turbines of varying designs and visibility are currently discernible from the turbine field, generally located in a northeasterly direction where the vegetation screening is minimal (Plate 4).

Impacts identified are:

8.1 World Heritage Sites (Sites 1-4, 6-10, 38, 39, 44, 89-91, 95, 96, 101, 102, 104-106, 110, 113-115, 119, 120, 122)

Whilst the proposed development is entirely situated within the World Heritage Site (Site 122), none of the individual elements of the WHS identified by this study are likely to be physically impacted by the development.

The turbine site is located near the northern boundary of the WHS and a large proportion of the designated area will be intervisible with some or all of the turbine, particularly areas of higher ground. Chimneys relating to former mining activity are a significant part of the WHS landscape and although there are turbines already visible from the area this proposal will alter the landscape setting during the construction and operational phases. Specific sites within the WHS (described above) are now largely within wooded or densely vegetated areas and are not particularly intervisible or audible with the turbine site. Wheal Busy is the most substantially surviving of the mining remains with the engine house and ancillary buildings (Site 1; Plate 7), blacksmiths workshop (Site 3; Plate 6) and arsenic calciner (Site 4) standing to approximately roof level and

shafts, tips and other workings remaining within an area of heathland. Due to its position extending down slope from the proposed turbine field, most of the upstanding remains including the engine house (Site 1) are intervisible with the turbine site to some degree and a moderately negative visual setting impact is anticipated (Plate 3). This is especially relevant given the relatively good public access to Wheal Busy. The remaining WHS sites are less accessible, less well preserved and generally better screened with slight negative or no anticipated impacts.

8.2 Scheduled Monuments (Site 1)

The Monument will not be physically affected by construction or subsurface works and visual setting impacts have been considered above.

8.3 Listed Buildings (Sites 2-90)

None of the Listed sites will be physically impacted by the proposed turbine and none are intervisible with the turbine field. Given the brief period of construction it is unlikely to significantly affect their visual setting. At least the top of the turbine may be visible from the majority of sites during the use phase depending on the density of vegetation. Dwellings outside central Chacewater (Sites 10, 11, 12, 16, 20, 21, 36, 44, 45, 46, 77, 80, 82, 85 and 89) and buildings that have been converted to use as dwellings (Sites 88 and 90) generally have significant mature or maturing deciduous trees around them. The impact to the visual setting of these is considered to be neutral or slight.

Those Listed sites within the centre of Chacewater (including though not exclusive to Fore Street, High Street, The Square and Station Road; Sites 13, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 37, 42, 43, 75, 76, 79, 86) are predominantly shops or former shops with living space above. Due to the positioning of Chacewater within quite a steep, narrow valley with vegetation above the line of development the turbine will not be visible from these sites. In addition, the nature of the developed area will diminish any audible impact of the turbine.

From the top of Site 92 (Plate 8; Plate 9), Blackwater Viaduct, there will be a clear view of the majority of the proposed turbine. The top of the turbine is likely to still be visible from the base of the viaduct which is a dominant feature of this valley. It is considered that the visual impact will be slight.

From the top of the other railway viaducts (Sites 94 and 116) there will be a clear view of the majority of the proposed turbine though at a slightly greater distance (Plate 2). The bases are within steep wooded valleys and are not likely to be intervisible with the turbine. Given that existing turbines visible from these sites and the distance from the proposed site, its visual setting is not considered to be significantly impacted by the proposal.

The milestones and parish boundary stones (Sites 5, 47-74) were generally located within dense undergrowth on quite busy roadsides and will not be significantly impacted by the proposal.

8.4 Other Sites

A section of eroded and rabbit burrowed field boundary hedge (Site 123; Plate 5) near the existing field entrance may have to be removed to improve site access. Given the relatively modern construction of this part of the boundary (c1880-1907) and that the rest of the boundary will not be physically affected this is not considered a major impact but rather a measurable loss of part of the attribute as described under the minor magnitude of impact category (Table 3).

The proposed cable route cuts through the line of one of the tracks (Site 126) depicted on the c1880 OS map, though the track may have had little formal surfacing and is not evident on any aerial photographs examined. Archaeological recording is unlikely to produce significant results.

Excavations for the turbine and its associated access and cabling will not directly impact on any of the remaining sites and are unlikely to impact on related deposits.

The remaining sites have relatively little surface expression, are often well screened and are not considered to be significantly impacted by the proposal.

9 Summary Impacts

The small scale nature of the proposed development has a correspondingly slight physical impact on the identified heritage assets during the construction phase. These include possible widening of existing access through a relatively modern field boundary and a narrow cut through the line of the track (Site 126) within the cable trench.

The operational phase impacts the visual setting of a number of the identified sites. Those most relevant include parts of the WHS, some of the inhabited Listed Buildings and the railway bridges though limited access and intervisibility significantly reduce visual setting impacts. The international significance, greater proximity and accessibility of Wheal Busy (Site 1; Plate 7), particularly the area defined by the Scheduled Ancient Monument, make it arguably the most important of the sites impacted visually.

The dismantling of the turbine would neutralise all previous visual impacts without further significant impacts to heritage assets and their landscape settings.

The dissemination of this report in line with the WSI is considered a positive impact for the proposed development.

10 Recommendations

Given the dissemination of this report and completion of the archaeological programme in line with Appendix 2, no further archaeological work is recommended.

11 Conclusion

Significant mining-related archaeology was identified within a two kilometre study area though the proposal is likely to have very limited archaeological impact. The cumulative effect of future turbine installations is likely to have greater impact and assessment of each additional proposal should be considered, particularly if within or visible from the World Heritage Site. From the Post Medieval period onwards, Cornwall has been subject to substantial visual impacts from quarrying and mining industries and although these are no longer operational they are considered an integral part of the current landscape generally and specifically within this study area, in addition to electrical and transport infrastructure. In the future, it maybe envisaged that wind turbines will also become an integral part of that same landscape. The environmental benefits of the turbine and dissemination of the archaeological data are considered appropriate mitigation for the minimal predominantly visual negative impacts of this proposal.

12 The Archive

The AC Ltd project number is AC12009E.

The project's archive is housed temporarily at the offices of Archaeological Consultancy Ltd, Goodagrane, Halvasso, Penryn, Cornwall, TR10 9BX before transferral to the Cornwall Record Office, Old County Hall, Station Road, Truro, Cornwall. The archive is documentary in nature in A4 format. It includes: site notes, research notes as well as copies of the brief, WSI and site report.

13 Bibliography

- Best. 1748. *Map of Cornwall*. AC Library copy.
- Blaeu, Jan. 1645. *Map of Cornwall*. AC Library copy.
- Blome, Richard. 1673. *Map of Cornwall*. AC Library copy.
- British Geological Survey Website www.bgs.ac.uk/geologyviewer (Accessed 13/07/2012)
- Borlase, W. (after). 1754. *Map of Cornwall*. AC Library copy.
- Department for Culture, Media and Sport. *Ancient Monuments and Archaeological Areas Act 1979*. HM Government. www.legislation.gov.uk. (Accessed 01/12/2011)
- English Heritage. 2005. *Wind Energy and the Historic Environment*
- English Heritage. 2010. *The Setting of Heritage Assets: English Heritage Guidance. Consultation Draft*.
- English Heritage. 2011. *The Setting of Heritage Assets: English Heritage Guidance*. Only available online at www.english-heritage.org.uk/professional/advice/advice-by-topic/setting-and-views/setting (Accessed 8/11/2011)

- Environment Act 1995: Section 97 (hedgerows). HM Government. www.legislation.gov.uk. (Accessed 01/12/2011)
- Goacher, H. 2012. *Proposed Wind Turbine on Land at Hillside Farm, Chacewater, Cornwall. Archaeological Assessment: Written Scheme of Investigation*. Unpublished report for AC Ltd.
- Gover, JEB. 1948. *Place-Names of Cornwall*. (As referenced in SMR)
- Hedgerow Regulations 1997. HM Government. www.legislation.gov.uk. (Accessed 01/12/2011)
- Heritage Gateway Website <http://www.heritagegateway.org.uk/gateway/> (Accessed 13/07/2012)
- Highways Agency. 2008. *Design Manual for Roads and Bridges: Volume 11, Section 2, Environmental Assessment, Part 5 Assessment and Management of Environmental Effects*.
- Holmes, J. 1983. *1000 Cornish Place Names Explained*. Truran Books, Penryn.
- Janson, Jan. 1646. *Map of Cornwall*. AC Library copy.
- Lawson-Jones, A. 2011. *Tregear Wind Turbine, Ladock, Cornwall: Archaeological Assessment*. Unpublished report for Historic Environment, Projects, Cornwall Council.
- Martyn. 1784. *Map of Cornwall*. AC Library copy.
- Moll, Herman. 1724. *Map of Cornwall from the Compleat Geographer*. AC Library copy.
- Morris, J. ed. 1979. *Domesday Book: A Survey of the Counties of England: Cornwall*. Chichester: Phillimore.
- Norden, John. 1728. *Map of Powder Hundred*. AC Library copy.
- Norden, John. 1728. *Map of Kerrier Hundred*. AC Library copy.
- Ordnance Survey, c1810. 1 *Inch Map* First Edition. AC Library copy.
- Ordnance Survey, 1880. *25 Inch Map* First Edition.
- Ordnance Survey, 1907. *25 Inch Map* Second Edition.
- Padel, O. J. 1988. *A Popular Dictionary of Cornish Place-Names*. Alison Hodge, Penzance
- Pine, John. 1588. *Armada Positions Map*. AC Library copy.
- Ratcliffe, D. 2012. *Brief for Historic Environment Assessment of Renewable Energy Projects*. Unpublished report for Cornwall Council.
- Speed, John. 1611. *Map of Cornwall*. AC Library copy.
- Tapper, B. 2010. *Historic Landscape Character and sensitivity mapping for Wind Farm installations in Cornwall*. Unpublished report for Historic Environment (Advice & Information), Cornwall Council.

The National Heritage List for England Website <http://list.english-heritage.org.uk/advancedsearch.aspx> (Accessed 18/07/2012)

Tithe Map 1840 and Apportionment 1840. *Parish of Kenwyn*. Accessed at the Cornwall Records Office.

UNESCO Website <http://whc.unesco.org/en/35> (Accessed 26/03/2012)

Waghenaer, Lucas Jansz. 1584. *Sea Coast Map*. AC Library copy.

World Heritage Site Website www.cornish-mining.org.uk. (Accessed 6/07/2012)

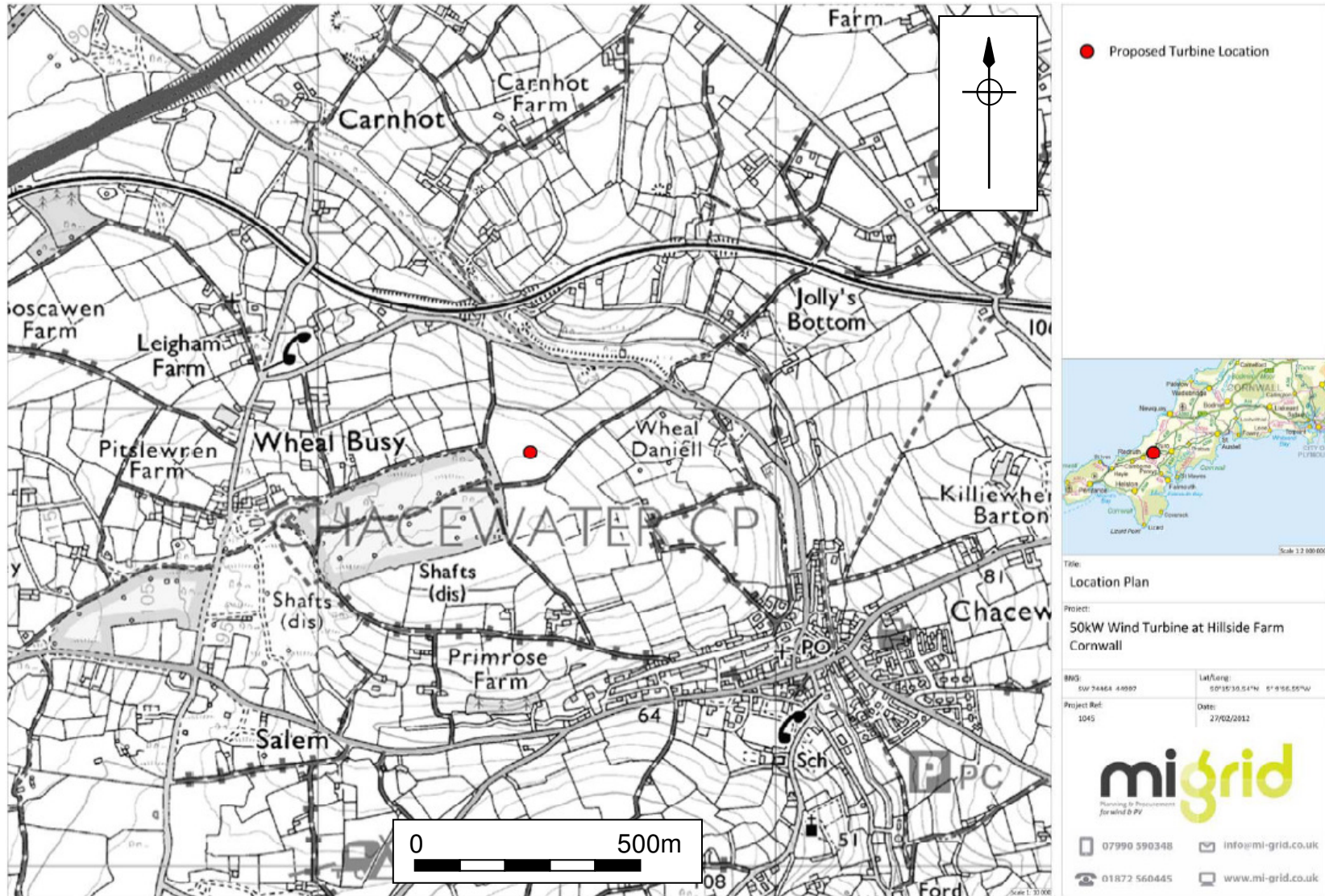


Figure 1 Site Location Map. Courtesy of MiGrid.

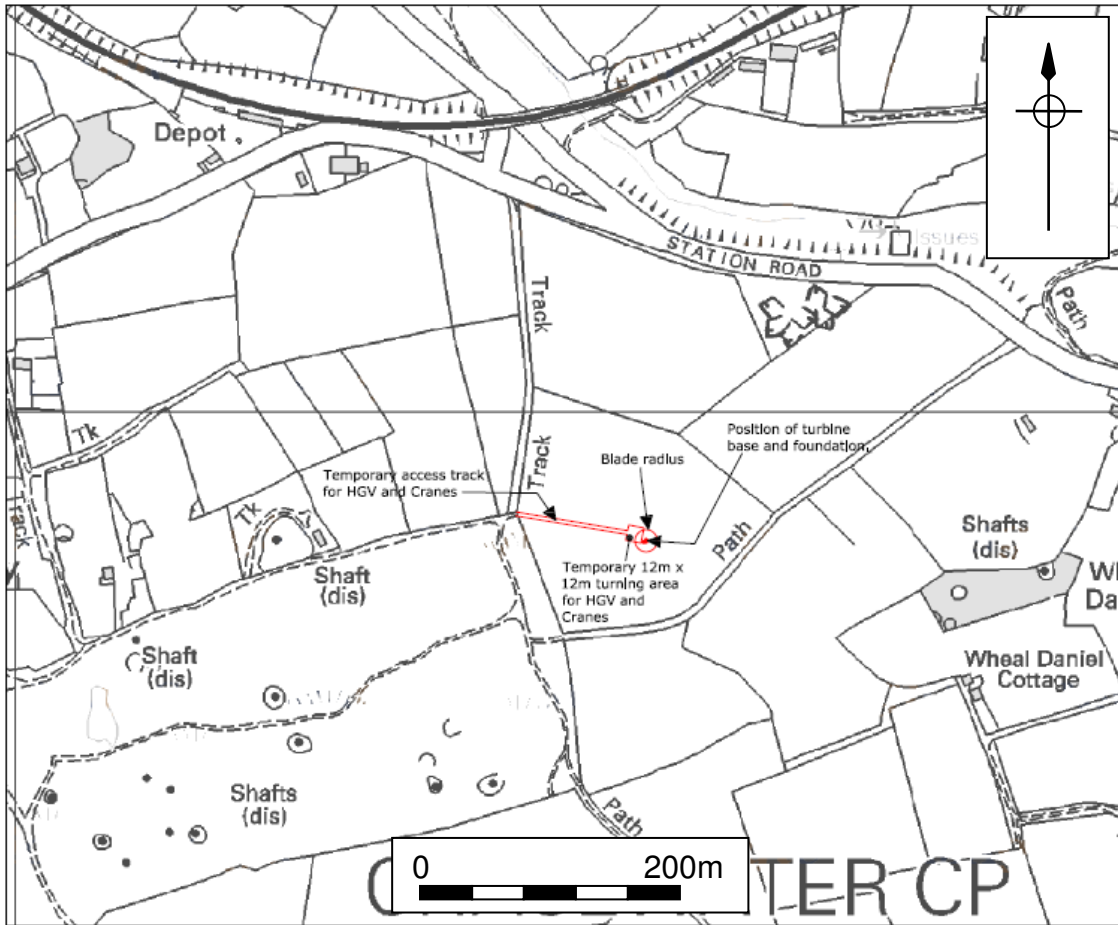


Figure 2 Turbine development area. Courtesy of MiGrid.



Plate 1 View from the Wind Turbine Field. Looking northeast.

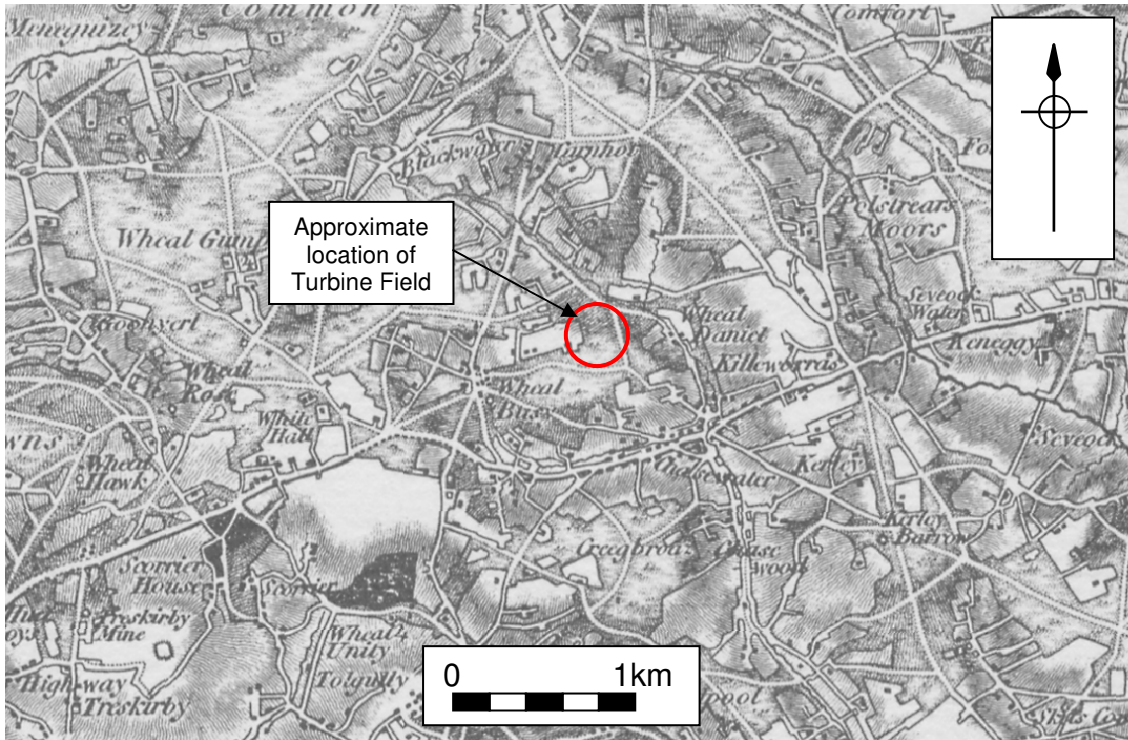


Figure 3 c1810 Ordnance Survey 1 inch map.

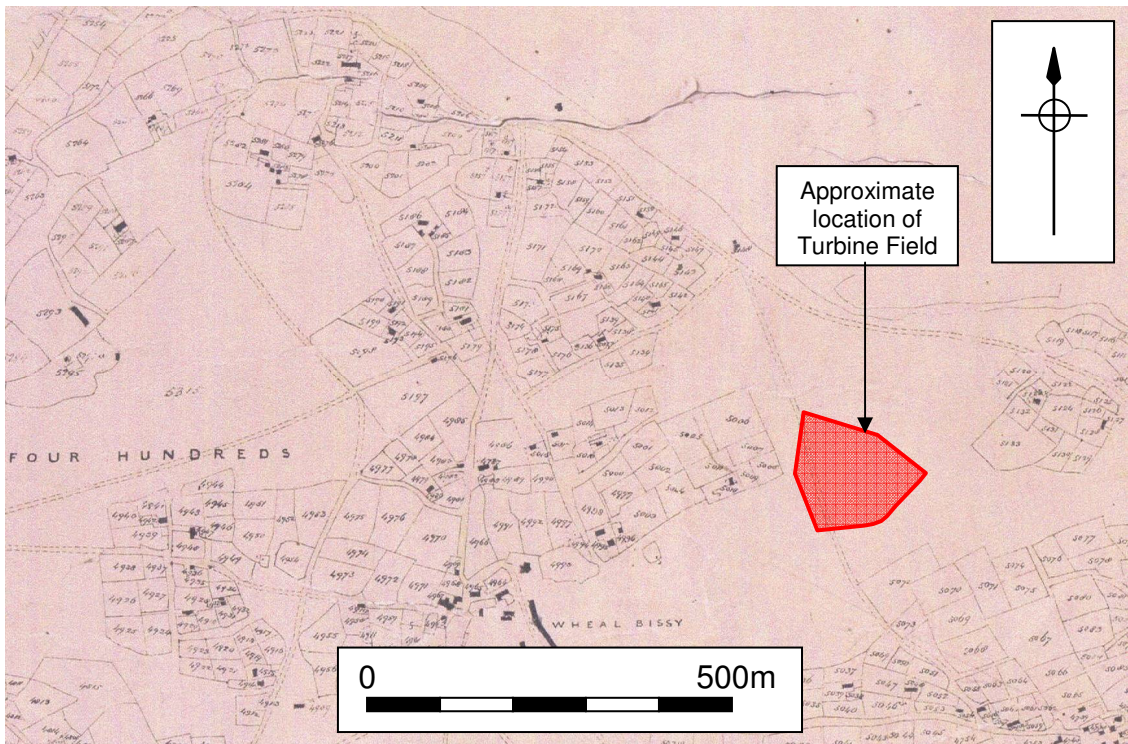


Figure 4 Tithe Map 1840 for Kenwyn Parish.

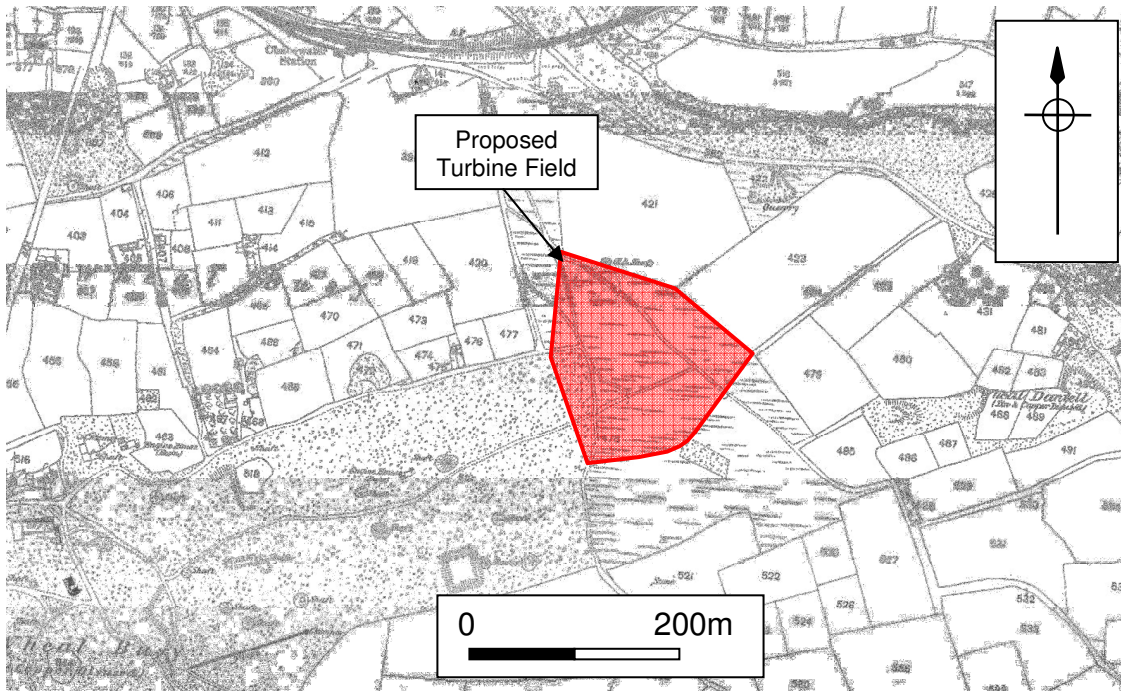


Figure 5 Part of the c1880 Ordnance Survey 1st edition 25 inch map.

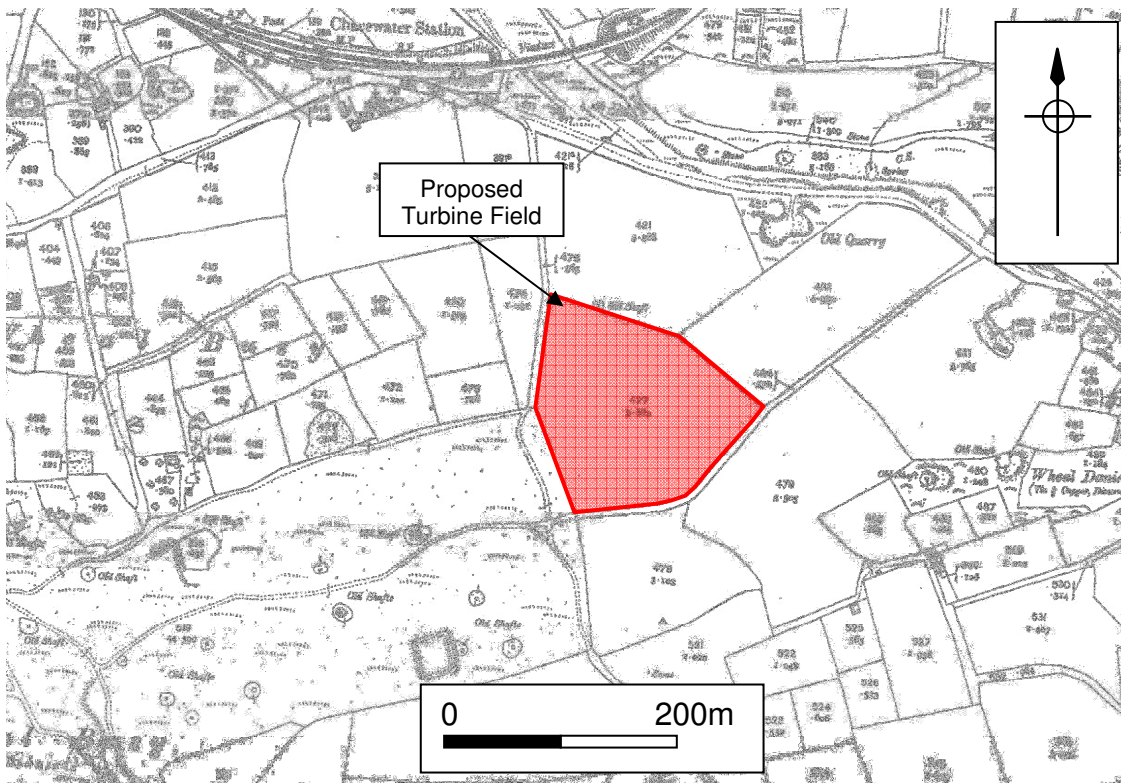


Figure 6 Part of the c1907 Ordnance Survey 2nd edition 25 inch map.

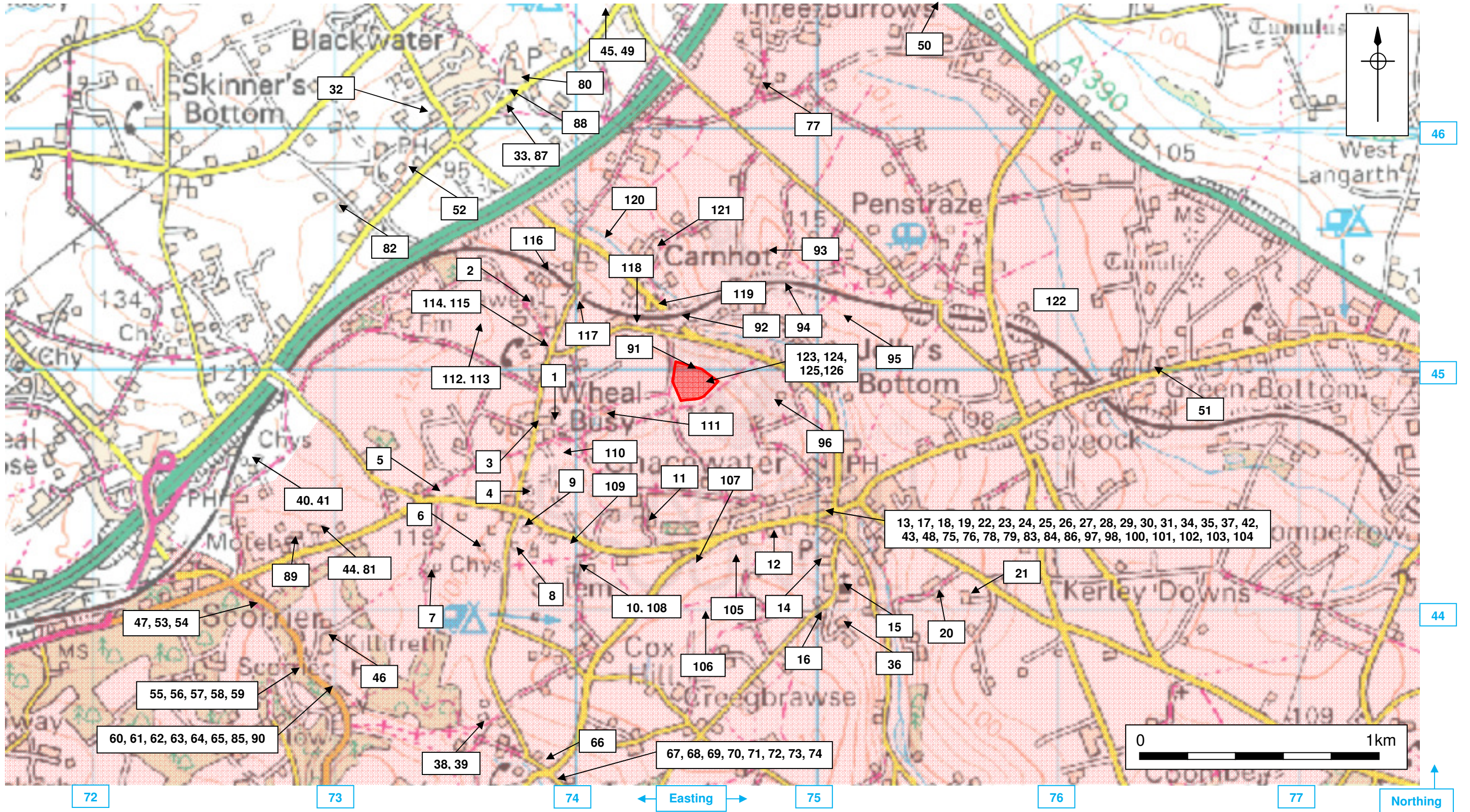


Figure 7 Locations of gazetteer sites. Map courtesy of Cornwall Council. World Heritage Site Area shown in pink, Proposed Turbine Field shown in red.

Figure 8 Zone of Theoretical Visibility Map. Courtesy of Cornwall Environmental Consultants Ltd.



This map is reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationary Office. Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. License No. 0100031673



Revisions			
Ref	Details of Revision	Date	By
A	VP03 location amended to United Downs, legend amended, final issue	26.07.2012	BH

- Legend**
- Site survey area
 - Turbine position (co-ordinates 174464,44907)
 - Study Area Boundary
 - Distance markers around site
 - Appraisal Viewpoint Locations and Numbers - see report and photograph appendix for more details

- Theoretical Visibility Colours**
- Areas from which site at 2m above ground level is theoretically visible
 - Areas from which proposed turbine at 24.6m (hub height above ground level) is theoretically visible
 - Areas from which proposed turbine at 34.2m (blade tip) above ground level is theoretically visible
- Notes**
 Modelled using Windfarm software. Groundmodel generated from OS Landform Profile .xyz gridding data to 10m grid. Target point set at proposed turbine location X = 174464 Y = 44907, overall heights 2m to represent full turbine height visibility, 24.6m to represent hub and 34.2m to represent blade tip according to manufacturer's technical data.

Status / Purpose of Issue **FINAL**

Project Name
 Hillside Farm Single Turbine
 Landscape and Visual Impact Assessment

Figure
Zone of Theoretical Visibility

Figure No	Rev	Scale	Date	By
CEC1996/05	A	Not to scale, see scale bar, print on A3	11.05.2012	AN

Client:
 M-Grid
 Trevascoe Park
 Blackwater
 Truro / Cornwall
 TR4 9JN

Prepared by:
 CEC Ltd
 Five Acres
 Allet / Cornwall
 TR4 9JN



Plate 2 Photographic montage of theoretical view of proposed wind turbine from point VP2 above (Figure 8).



Plate 3 Photographic montage of theoretical view of proposed wind turbine from Wheal Busy SAM (Site 1 Figure 7 above)



Plate 4 Other wind turbines visible from Proposed Turbine Field. Looking northeast.



Plate 5 Representative section of Proposed Turbine Field boundary. Looking east.



Plate 6 Site 3 Wheal Busy Smithy. Looking southeast.



Plate 7 Wheal Busy SAM with Smithy (Site 3) and Engine House (Site 1) in the distance. Looking southwest.



Plate 8 Blackwater Railway Viaduct (Site 92) from Proposed Turbine Field. Looking north.



Plate 9 Blackwater Railway Viaduct (Site 92). Looking southeast.

Appendix 1 Brief

Brief for Historic Environment Assessment of Renewable Energy Projects.

Date: 24/04/2012

Sites: See below.

Application Numbers : PA12/02409 Goodern Manor; PA12/02415 Hillside Farm; PA12/02415 Boscowen Farm

Historic Environment Planning Advice Officer: Dan Ratcliffe

Planning Case Officer: Adam Carlyon

This brief is only valid for six months. After this period the Historic Environment Archaeological Advisor (HEAA) should be contacted. The contractor is strongly advised to visit the site as there may be implications for accurately costing the project.

This generic brief is intended for use only for the assessment of the above named single turbine wind power proposals and should result in the production of separate WSIs for each. HES would be happy to comment on the content of these documents before work on these studies commences.

Contractors Written Scheme of Investigation (WSI)

No ground works are to be undertaken until the HEAA and the Local Planning Authority (LPA) have approved the archaeological contractor's WSI.

1 Introduction

This brief has been written by the HEAA and sets out the minimum requirements for an assessment of the potential impacts of the development of the installation of three separate single wind turbines within the World Heritage Site.

An assessment of the archaeological potential of the sites and the potential visual and physical impacts of the development on surrounding historic assets will be required to provide information in support of a planning application for the proposed development in accordance with the requirements of paragraph 128 of the NPPF. HES believes high quality design should play a key role in minimising any adverse effects of renewable energy projects, whether this is directed at the disposition of wind turbines and energy crops in the landscape or the positioning of photo-voltaic cells on historic buildings or within the countryside. Fundamental to achieving high quality design will be a sound understanding of the character and importance of the historic assets involved, whether at the scale of individual buildings and sites or more extensive historic areas and landscapes.

As these applications lie within the World Heritage Site special regard must be given within the assessments to the conservation requirements of the Outstanding Universal Value of the site.

2 Site Location and Description-

Please refer to the Cornwall Online Planning Register using the case references below for location plans

3 Planning and Archaeological Background

PA12/02409 Goodern Manor– This site lies within the Cornish Mining World Heritage Site (WHS). The site in which the turbine is proposed lies within a very complex historic landscape including the historic site of Wheal Jane copper and tin mine to the immediate north, the 20th century expansion of the Wheal Jane operation to the south west, and historic surface mining remains along a valley to the south. The field in which the turbine is proposed shows ‘crop marks’ on the Historic Environment Record of probable post medieval date and more widely the field enclosure patterns are marked by small enclosures characteristic of miners smallholdings. Two Scheduled Monuments (1019502 Round and Round Barrow) and (1019501 Goodern Barrow) and a number of Grade II Listed Buildings lie within 700-1000m of the site. In accordance with paragraph 128 of the NPPF we would advise yourselves and the LPA that assessment is required of the effect of the proposal on the significance of the setting and character of the mining landscape of the WHS, Listed Buildings and Scheduled Monuments and impacts on any archaeological remains and field boundaries that may be affected by installation and presence of the turbine and any associated ground disturbance from cabling, access roads and installation works.

PA12/02415 Hillside Farm- This site lies in the centre of a field directly adjacent to a Scheduled Monument (1021392 Wheal Busy) lying within the World Heritage Site to the north west of Chacewater Conservation Area. The proposed turbine site would be approximately 60m from the boundary of the Scheduled Monument. As with the above site this is an extremely complex industrial landscape, the conservation of the Outstanding Universal Value of which is given ‘very great’ weight by paragraph 132 of the NPPF. It is beyond the scope of this brief to provide any detailed assessment of the degree to which this proposal may negatively affect the OUV of the site and the interrelated setting of the Scheduled Monument but it is clear that the very great weight of this consideration that should be accorded during the determination of the application requires a corresponding degree of professional assessment and justification. In accordance with paragraph 128 of the NPPF we would advise yourselves and the LPA that any application for this site should be accompanied by a proportionate assessment of the effect of the proposal on the significance of the setting and character of the mining landscape of the WHS, Listed Buildings and Scheduled Monuments and impacts on any archaeological remains and field

boundaries that may be affected by installation and presence of the turbine and any associated ground disturbance from cabling, access roads and installation works.

PA12/02415 Boscowen Farm. This site lies to the north west of a Scheduled Monument (1021392 Wheal Busy) lying within the World Heritage Site to the north west of Chacewater Conservation Area. The proposed turbine site would be in this case about 700m from the Scheduled Monument closer to the unscheduled but still highly visible site of Boscowen Mine. As with the above sites this is again an extremely complex industrial landscape, the conservation of the Outstanding Universal Value of which is given 'very great' weight by paragraph 132 of the NPPF. In this case the development's location between Boscowen and Wheal Busy mines which the HER reports were worked contemporaneously by the same company may complicate the visual impact of this development. It is beyond the scope of this brief to provide any detailed assessment of the degree to which this proposal may negatively affect the OUV of the World Heritage Site site and the interrelated setting of the Scheduled Monument but it is clear that the very great weight of this consideration that should be accorded during the determination of the application would require a corresponding degree of professional assessment and justification. In accordance with paragraph 128 of the NPPF we would advise yourselves and the LPA that any application for this site should be accompanied by a proportionate assessment of the effect of the proposal on the significance of the setting and character of the mining landscape of the WHS, Listed Buildings and Scheduled Monuments and impacts on any archaeological remains and field boundaries that may be affected by installation and presence of the turbine and any associated ground disturbance from cabling, access roads and installation works.

4 Requirement for Work

The assessment needs to both a) assemble an evidence base to identify those historic assets which may be impacted by the proposed development and b) evaluate the significance of the assets affected and the significance of their settings and identify potential impacts on that significance either direct or indirect. This will involve a desk based assessment including a viewshed analysis to establish the Zone of Theoretical Visibility (ZTV) of the proposal site, the drawing together of information from Heritage Asset registers and other sources including historic maps, and a walk over survey of the extant remains of the site including the preparation of photographic montages of key views affected. This work should be capable of providing evidence for the assessment of impacts of the development and informing options for its design.

The site specific aims are to:

- Establish viewsheds of the proposal site.
- Draw together existing historical and archaeological information about the site and its landscape setting from published and unpublished sources and information on designated and undesignated assets from national and local Historic Asset registers (such as the CSHER, NMR, Heritage Gateway, etc).
- Review and analyse historic map evidence for the site.
- Produce 'statements of significance' for all designated historic assets, that are identified as potentially impacted on by the current proposals. Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local'.
- Inform whether archaeological recording of any extant remains is required.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.
- Identify the construction, use and 'end of life' impacts of the current proposals on the 'national importance' of Scheduled Monuments, the 'Outstanding Universal Value of the World Heritage Site' and on undesignated historic assets as described in PPS5.
- Follow English Heritage Guidance 'The Setting of Heritage Assets' (2011) to produce assessments of the significance of setting of affected assets and the impacts of the proposals on those settings.

6 General Guidance

- 6.1 The archaeological contractor is expected to follow the code of the Institute for Archaeologists (IfA).
- 6.2 All of the latest Health and Safety guidelines shall be followed on site.
- 6.3 Terminology will be consistent with the English Heritage Thesaurus.
- 6.4 The consultation draft of English Heritage guidance 'The Setting of Heritage Assets' should inform the assessment of indirect impacts.

7 Results

- 7.1 A draft report shall be submitted within a length of time (but not exceeding six months) to be agreed between the applicant, the archaeological contractor, and Cornwall Council Historic Environment Advice.
- 7.2 The archaeological contractor will undertake the English Heritage/ads online access to the index of archaeological investigations (OASIS).
- 7.3 Once agreed a paper copy of the finalised report will be provided to and held by the Cornwall and Scilly Historic Environment Record (HER) and made available for public consultation. A further digital copy shall be supplied on CD-ROM preferably in 'Adobe Acrobat' PDF format.
- 7.4 The report must contain:

- A concise non-technical summary of the project results.
- The aims and methods adopted in the course of the investigation.
- A discussion of the archaeological findings in terms of both the site specific aims and the desk based research.
- A location map, copies of the viewshed analysis mapping, a map or maps showing assets referred to in the text and copies of historic maps and plans consulted shall be included, with the boundary of the development site clearly marked in red on each. All plans shall be tied to the national grid.
- All sources referred to should be included in the bibliography, even if the results were negative; N.B. publication references should always include relevant page numbers.
- All specialist reports and assessments.
- A summary of the archive contents and date of deposition.
- A copy of the brief and the approved WSI will be included as an appendix.

8 Monitoring

- 8.1 The HEAA will monitor the work and should be kept regularly informed of progress.
- 8.2 Notification of the start of work shall be given preferably in writing to the HEAA at least one week in advance of its commencement.
- 8.3 Any variations to the WSI shall be agreed with the HEAA, preferably in writing, prior to them being carried out.

Appendix 2 Written Scheme of Investigation Proposed Wind Turbine on land at Hillside Farm, Chacewater, Cornwall.

Archaeological Assessment: Written Scheme of Investigation.

Author: Hayley Goacher BA (Hons) PlfA
Report Date: 25.05.2012
Client: Migrid
Project No: AC12009E
Planning Reference: PA12/02415
Statutory Protection: World Heritage Site
Proposal: Installation of one wind turbine
Civil Parish: Chacewater
District: Central 1
County: Cornwall
Country: England
National Grid Reference: SW 74464 44907

Archaeological Consultancy Limited
Goodagrane, Halvasso, Penryn, Cornwall, TR10 9BX
Tel 0044 (0)1326 341 061
E-mail enquiries@archaeologicalconsultancy.com
Website www.archaeologicalconsultancy.com
England and Wales Registered Company No. 5784610



1 Summary

The proposed wind turbine site on land at Hillside Farm (NGR SW 74464 44907) is within a complex historic mining landscape, directly adjacent to a Scheduled Monument. This landscape is also becoming increasingly favoured for the erection of wind turbines which potentially impacts historic environment assets and their setting.

Archaeological Consultancy Limited (AC) has been commissioned by Chloe Bines of Migrid, to provide an archaeological assessment to facilitate appropriate planning decisions. This document sets out the proposed methodology for the assessment.

2 Site location

2.1 Location

The site is located approximately 800m northwest of Chacewater in the civil parish of Chacewater (NGR SW 74464 44907).

2.2 Topography

The site is situated on a hilltop plateau approximately 110m OD. The ground slopes gradually down in all directions though it is more steeply sloped on the north and south sides.

2.3 Geology

The bedrock is recorded as Porthtowan Formation of mudstone and sandstone. This is sedimentary bedrock formed approximately 364 to 391 million years ago in the Devonian Period. A dyke of Felsite running northeast to southwest just to the southwest of the study area was exploited extensively as part of what has now become part of the World Heritage Site (www.bgs.ac.uk/geologyviewer).

3 Project background

3.1 Development background

Dan Ratcliffe (Historic Environment Planning Advice Officer, Cornwall Council) has requested an archaeological assessment to be provided in support of planning application PA12/02415. AC was commissioned to carry out the archaeological assessment.

3.2 Archaeological and Historical background

The site is immediately east of Wheal Busy, a Scheduled Monument (No. 32992). Wheal Busy was one of the most productive copper mines in the Scorrier district. Tin was also mined here and arsenic and wolfram were variously important secondary products. The monument consists of three discrete but related areas. The largest of these is described in the Schedule as “a complex palimpsest of earthworks” including the remains of lode back pits, shallow and deeper shafts, and the remains of engine houses and a whim platform. Pools dams and leats are also present in addition to remains of the earlier arsenic works and dressing floors. The earthworks also include remains

dating to the establishment and operation of a WWII military encampment. The north western part of the monument relates to 'Engine House Shaft' and its 1860s engine house. The south west part relates to a 1900s arsenic works.

The site is surrounded by historic mining activity including shafts and tips that relate to parts of the Gwennap, Kennall Vale and Perran Foundry area of the Cornwall Mining World Heritage Site. All the mine sites close by are now disused.

Within a radius of three kilometres are a series of barrows providing evidence of a surrounding Prehistoric landscape amongst the numerous mining remains.

To the southwest of the site lies Chacewater Conservation Area which contains many listed buildings relating to the significance of the World Heritage Site.

The Cornwall Historic Landscape Characterisation (HLC) records that Chacewater, Wheal Busy and the application site are contained within a landscape chiefly historically characterised by the post-medieval enclosure and colonisation of former rough ground.

4 Project aims and objectives

The principal aims will be to:

- Draw together the historical and archaeological information about the site.
- Review and analyse historic map evidence for the site.
- Produce 'statements of significance' for all designated historic assets, that are identified as potentially impacted on by the current proposals. Where currently undesignated assets are identified their likely significance should be indicated i.e. 'national', 'regional' or 'local'.
- Inform whether archaeological recording of any extant remains is required.
- Inform whether an archaeological evaluation or further archaeological recording of any potential buried remains is required.
- Inform whether palaeo-environmental sampling would be required.
- Identify the construction, use and end-of-life impacts of the current proposals on the 'national importance' of Scheduled Monuments, the 'Outstanding Universal Value of the World Heritage Site' and on undesignated assets as described in PPS5.
- Apply recently published EH guidance on the assessment of the setting of Heritage Assets.

5 Method statement

5.1 General methodology

AC complies with the guidelines set out in the IfA's Standards and Guidance and follows the IfA code of conduct.

5.2 Desk-based assessment (DBA) and walk over survey

An initial DBA will draw together existing published and unpublished materials pertinent to the site including detailed searches and analyses of registers of archaeological sites, event reports; a map regression exercise; and a review of available aerial photographs.

This will include material at the Cornwall HER, the Cornwall Record Office, the Cornish Studies Library, recent excavation reports and other material held in the AC library as appropriate.

Further research will be undertaken as necessitated by the findings.

A walk over survey will record any extant visible remains on the site. Existing plans will be annotated with archaeological detail typically at 1:1000 or 1:2,500 with additional details as required.

5.3 Impact Assessment

A gazetteer of designated heritage assets within 2km and relevant heritage assets within 1km of the site will include a statement of their significance. Studies will then be undertaken to determine the specific nature and impact of the turbine proposed for this site proportionate to the significance of each asset and the degree of impact upon that significance. This will include consideration on the construction, use and end-of-life impacts of the turbine. The cumulative impact of these turbines on the heritage assets will then be considered to enable further recommendations and planning decisions to be made. The impact assessment will include recommendations for minimising negative impacts and maximising positive impacts on heritage assets (including the historic landscape).

5.4 Report

A single archive report will be prepared to describe the results of the archaeological work. The final report will contain: summary, aims and methods, discussion, conclusion, historic maps, viewshed map, location and other relevant plans tied in to the OS grid and an archive index including intended date of deposition. Appendices will include the WSI, brief and any specialist reports as appropriate.

Copies of the archive report will be submitted to: the client; the County Historic Environment Record (HER); Cornwall Record Office; National Monuments Record (NMR) in Swindon and all significant contributors where (with the exception of the client's and contributors' copies) they will be available for public consultation.

5.5 Archive

The site archive will be prepared in line with the brief.

The archive will be of a documentary nature and will be deposited in a suitable form with the Cornwall Record Office within six months of the completion of the final report and confirmed in writing with the HEPAO.

5.6 Web-based publications

The online OASIS record will be completed when the report is submitted and a digital version of the report will be uploaded.

6 Project management and structure

6.1 Staff

The project will be managed by Matt Mossop (AC) whilst Hayley Goacher will undertake the desk-based assessment, walk-over survey and compilation of the report.

Matt Mossop MA (Hons) MGSDip MIAI MifA Project Manager

Matt has extensive archaeological experience in England, France and Ireland from 1992 onwards, becoming a licensed director in Ireland (2001). He has directed numerous excavations and presented papers for the World Archaeological Congress, Royal Society of Antiquaries of Ireland, universities and local groups in Ireland and the UK.

Hayley Goacher BA (Hons) PlfA Project Officer

Hayley completed her BA in archaeology at The University of Durham in 2009 and has archaeological experience, from 2004 onwards, of both excavation and post-excavation, principally with contractual archaeological firms. She joined AC in July 2010 and has since undertaken a number of site assessments, walkover and photographic surveys, watching briefs and evaluations, most recently including Trewarthenick, Gwel An Mor and Treverbyn Farm.

Whilst we endeavour to avoid changes to senior project staff, AC reserves the right to change the nominated personnel if necessary.

6.2 Project facilities and infrastructure

The project will be based at the AC office in Halvasso, Penryn. AC has a computer network running Windows XP Professional and Vista. Report texts are generated in Word 2007.

6.3 Timetable

The work is anticipated to commence as soon as we have written approval from the Historic Environment Planning Advice Officer (HEPAO). The fieldwork stage of the project is expected to take one day.

An archive report will be completed within 6 months of the end of the fieldwork. If the site proves complex or specialist reports are required, an interim statement will be produced in the same time frame. The archive will be deposited with the Cornwall Record Office within six months of the completion of the final report.

6.4 Health and safety

AC complies with all relevant health and safety guidelines and legislation. A risk assessment will be prepared for the site work and all staff will be briefed on the contents of the final version. PPE will be issued and used as required.

6.5 Insurance

AC has adequate insurance for employer's liability, public liability and professional indemnity. Further details are available on request.